

File E205608

Vol 1

Issued: 2001-04-23

Revised: 2005-09-09

FOLLOW-UP SERVICE PROCEDURE
(TYPE R)MOTOR CONTROLLERS, MAGNETIC
(NLDX, NLDX7)

Manufacturer: ZHEJIANG CHINT ELECTRICS CO LTD
(111876-001) CHINT INDUSTRIAL ZONE
WENZHOU,
ZHEJIANG 325604 CHINA

Applicant: SAME AS MANUFACTURER
(111876-001)

Listee: SAME AS MANUFACTURER
(111876-001)

This Procedure authorizes the above Manufacturer to use the marking specified by Underwriters Laboratories Inc. only on products covered by this Procedure, in accordance with the applicable Follow-Up Service Agreement.

The prescribed Mark or Marking shall be used only at the above manufacturing location on such products which comply with this Procedure and any other applicable requirements.

The Procedure contains information for the use of the above named Manufacturer and representatives of Underwriters Laboratories Inc. and is not to be used for any other purpose. It is lent to the Manufacturer with the understanding that it is not to be copied, either wholly or in part, and that it will be returned to Underwriters Laboratories Inc. upon request.

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UNDERWRITERS LABORATORIES INC.



Sajeev Jesudas
Chief Operating Officer



Issued: 2004-11-03 ML FILE NO. E244862

MULTIPLE LISTING
of
MAGNETIC
(NLDX/NLDX7)
for

[119799-001] ETA ELECTRO S A

Basically Listed for:

[111876-001] ZHEJIANG CHINT ELECTRICS CO LTD (NBK)

Basically Listed products covered by Procedure and/or Reports under File No. E205608, Volume 1

Products Covered	Report Date	Basic Applicant's (Supplier's) Product Designation	Multiple Listee's Product Designations
Magnetic contactors		CJX2- or NC1-; followed by 09, 12, 18, 25, 32, 40, 50, 65, 80, or 95	CB3A; followed by 09, 12, 18, 25, 32, 40, 50, 65, 80, or 95

MARKING: Same as that described in Follow-Up Service Procedure and/or Report except for Multiple Listee's name, ML Tradename, and product designation.

UL INSPECTION CENTER HANGZHOU – 325

Issued: 2005-01-31

ML FILE NO. E93602

MULTIPLE LISTING
of
MAGNETIC
(NLDX/NLDX7)
for

[534510001] LOVATO ELECTRIC S P A

Basically Listed for:

[111876-001] ZHEJIANG CHINT ELECTRICS CO LTD

Basically Listed products covered by Procedure and/or Reports under File No. E205608

Products Covered	Vol.	Basic Applicant's (Supplier's) Product Designation	Multiple Listee's Product Designations
Accessory, Indicator	1	ND16 Series	8LP2TIL Series

MODELS ARE ULS/CNL LISTED

MARKING: Same as that described in Follow-Up Service Procedure and/or Report except for Multiple Listee's name, ML Tradename, and product designation.

UL INSPECTION CENTER HANGZHOU – 325

ML FILE NO. E245258

Issued: 2007-01-31
Revised: 2010-05-03

MULTIPLE LISTING
of
MOTOR CONTROLLERS, MAGNETIC
(NLDX, NLDX7)
for

[250431-001] ELECTRICAL & ELECTRONIC CONTROLS INC

Basically Listed for:

[111876-001] ZHEJIANG CHINT ELECTRICS CO LTD (NBK)

Basically Listed products covered by Procedure and/or Reports under File No. E205608, Volume 1

Products Covered	Report Date	Basic Applicant's (Supplier's) Product Designation	Multiple Listee's Product Designation
Accessory for use with NC8 (ECX) contactors	2001-04-23	F4	ECX-4NC
		F4	ECX-3N0-1NC
		F4	ECX-1NO-3NC
Magnetic reversing contactor	2002-04-10	NC1-18	ECX18
		NC1-25	ECX25
		NC1-32	ECX32
		NC1-65	ECX65
		NC1-95	ECX95
Accessory for use with NC2 (ECX) contactors	2006-04-12	F5	ECX-.1-30S-ON
		F5	ECX-10-180S-ON
		F5	ECX-.1-30S-OFF
		F5	ECX-10-180S-OFF
Accessory, Indicators	2002-06-17	NC6-09	ECX2

LITERATURE IS IDENTICAL TO BASICS

MARKING: Same as that described in Follow-Up Service Procedure and/or Report except for Multiple Listee's name, ML Tradename, when applicable, and product designation.

UL INSPECTION CENTER HANGZHOU - 325

Issued: 2007-01-31
New: 2010-05-03

M/L [250431-001] ELECTRICAL & ELECTRONIC CONTROLS INC

AP [111876-001] ZHEJIANG CHINT ELECTRICS CO LTD (NBK)

Products Covered	Report Date	Basic Applicant's (Supplier's) Product Designation	Multiple Listee's Product Designation
Magnetic contactors	2006-04-12	NC2-115	ECX-115
		NC2-150	ECX-150
		NC2-185	ECX-185
		NC2-225	ECX-225
		NC2-265	ECX-265
		NC2-330	ECX-330
		NC2-400	ECX-400
		NC2-500	ECX-500
		NC2-630	ECX-630

LITERATURE IS IDENTICAL TO BASICS

MARKING: Same as that described in Follow-Up Service Procedure and/or Report except for Multiple Listee's name, ML Tradename, when applicable, and product designation.

UL INSPECTION CENTER HANGZHOU - 325

Issued: 2008-09-08

ML FILE NO. E40944

MULTIPLE LISTING
of
MOTOR CONTROLLERS, MAGNETIC - COMPONENT
(NLDX, NLDX7)
for

[402451-001] DAYTON ELECTRIC MFG CO

Basically Listed for:

[111876-001] ZHEJIANG CHINT ELECTRICS CO LTD (NBK)

Basically Listed products covered by Procedure and/or Reports under File No. E205608, Volume 1

Products Covered	Report Date	Basic Applicant's (Supplier's) Product Designation	Multiple Listee's Product Designations
Magnetic contactor	2002-04-10	NC1-40	2UXE9
		NC1-40	2UXF1
		NC1-40	2UXF2
		NC1-50	2UXF3
		NC1-50	2UXF4
		NC1-50	2UXF5
		NC1-65	2UXF6
		NC1-65	2UXF7
		NC1-65	2UXF8
		NC1-80	2UXF9
		NC1-80	2UXG1
		NC1-80	2UXG2
		NC1-09	2UXK2
		NC1-09	2UXK3
		NC1-09	2UXK4
		NC1-12	2UXK5
		NC1-12	2UXK6
NC1-12	2UXK7		

LITERATURE IS IDENTICAL TO BASICS

MARKING: Same as that described in Follow-Up Service Procedure and/or Report except for Multiple Listee's name, ML Tradename, when applicable, and product designation.

UL INSPECTION CENTER HANGZHOU - 325

Issued: 2008-09-08

M/L [402451-001] DAYTON ELECTRIC MFG CO
AP [111876-001] ZHEJIANG CHINT ELECTRICS CO LTD (NBK)

Products Covered	Report Date	Basic Applicant's (Supplier's) Product Designation	Multiple Listee's Product Designations
Magnetic contactor	2002-04-10	NC1-18	2UXK8
		NC1-18	2UXK9
		NC1-18	2UXL1
		NC1-25	2UXL2
		NC1-25	2UXL3
		NC1-25	2UXL4
		NC1-32	2UXL5
		NC1-32	2UXL6
		NC1-32	2UXL7
		NC1-09N	2UXL8
		NC1-09N	2UXL9
		NC1-09N	2UXN1
		NC1-12N	2UXN2
		NC1-12N	2UXN3
		NC1-12N	2UXN4
		NC1-18N	2UXN5
		NC1-18N	2UXN6
		NC1-18N	2UXN7
		NC1-25N	2UXN8
		NC1-25N	2UXN9
		NC1-25N	2UXP1
		NC1-95	2UXT1
		NC1-95	2UXT2
		NC1-95	2UXT3
		NC1-09	2UXT4
		NC1-09	2UXT5
NC1-09	2UXT6		

LITERATURE IS IDENTICAL TO BASICS

MARKING: Same as that described in Follow-Up Service Procedure and/or Report except for Multiple Listee's name, ML Tradename, when applicable, and product designation.

UL INSPECTION CENTER HANGZHOU - 325

Issued: 2008-09-08

M/L [402451-001] DAYTON ELECTRIC MFG CO
AP [111876-001] ZHEJIANG CHINT ELECTRICS CO LTD (NBK)

Products Covered	Report Date	Basic Applicant's (Supplier's) Product Designation	Multiple Listee's Product Designations
Magnetic contactor	2002-04-10	NC1-12	2UXT7
		NC1-12	2UXT8
		NC1-12	2UXT9
		NC1-25	2UXU1
		NC1-25	2UXU2
		NC1-25	2UXU3
		NC1-40	2UXU4
		NC1-40	2UXU5
		NC1-40	2UXU6
		NC1-50	2UXU7
Accessory for use with NC2 contactors, Auxiliary contact	2006-04-12	F5	2UXH2
		F5	2UXH3
		F5	2UXH4
		F5	2UXH5
		F5	2UXH6
		F5	2UXH7
		F5	2UXH7

LITERATURE IS IDENTICAL TO BASICS

MARKING: Same as that described in Follow-Up Service Procedure and/or Report except for Multiple Listee's name, ML Tradename, when applicable, and product designation.

UL INSPECTION CENTER HANGZHOU - 325

ML FILE NO. E329241

Issued: 2009-06-29
Revised: 2009-06-30

MULTIPLE LISTING
of
MOTOR CONTROLLERS, MAGNETIC
(NLDX, NLDX7)
for

[100521-113] US BREAKER INC

Basically Listed for:

[111876-001] ZHEJIANG CHINT ELECTRICS CO LTD (NBK)

Basically Listed products covered by Procedure and/or Reports under File No. E205608, Volume 1

Products Covered	Report Date	Basic Applicant's (Supplier's) Product Designation	Multiple Listee's Product Designations
Magnetic contactors	2002-4-10	CJX2-09	NC1D0910
		CJX2-09	NC1D0901
		CJX2-09	NC1D0904
		CJX2-09	NC1D0908
		CJX2-12	NC1D1210
		CJX2-12	NC1D1201
		CJX2-12	NC1D1204
		CJX2-12	NC1D1208
		CJX2-18	NC1D1810
		CJX2-18	NC1D1801
		CJX2-25	NC1D2510
		CJX2-25	NC1D2501
		CJX2-25	NC1D2504
		CJX2-25	NC1D2508
		CJX2-32	NC1D3210
		CJX2-32	NC1D3201
		CJX2-40	NC1D4011
		CJX2-40	NC1D4004
		CJX2-40	NC1D4008
		CJX2-50	NC1D5011
CJX2-50	NC1D5004		
CJX2-50	NC1D5008		

MARKING: Same as that described in Follow-Up Service Procedure and/or Report except for Multiple Listee's name, ML Tradename, when applicable, and product designation.

UL INSPECTION CENTER HANGZHOU - 325

Issued: 2009-06-29
Revised: 2009-06-30

M/L [100521-113] US BREAKER INC
AP [111876-001] ZHEJIANG CHINT ELECTRICS CO LTD (NBK)

Products Covered	Report Date	Basic Applicant's (Supplier's) Product Designation	Multiple Listee's Product Designations
Magnetic contactors	2002-4-10	CJX2-65	NC1D6511
		CJX2-65	NC1D6504
		CJX2-65	NC1D6508
		CJX2-80	NC1D8011
		CJX2-80	NC1D8004
		CJX2-80	NC1D8008
		CJX2-95	NC1D9511
		CJX2-95	NC1D9504
		CJX2-95	NC1D9508
		NC1-09	NC1D0910
		NC1-09	NC1D0901
		NC1-09	NC1D0904
		NC1-09	NC1D0908
		NC1-12	NC1D1210
		NC1-12	NC1D1201
		NC1-12	NC1D1204
		NC1-12	NC1D1208
		NC1-18	NC1D1810
		NC1-18	NC1D1801
		NC1-25	NC1D2510
		NC1-25	NC1D2501
		NC1-25	NC1D2504
		NC1-25	NC1D2508
		NC1-32	NC1D3210
		NC1-32	NC1D3201
		NC1-40	NC1D4011
		NC1-40	NC1D4004
		NC1-40	NC1D4008
		NC1-50	NC1D5011
		NC1-50	NC1D5004
		NC1-50	NC1D5008
		NC1-65	NC1D6511
NC1-65	NC1D6504		

MARKING: Same as that described in Follow-Up Service Procedure and/or Report except for Multiple Listee's name, ML Tradename, when applicable, and product designation.

UL INSPECTION CENTER HANGZHOU – 325

Issued: 2009-06-29
New: 2009-06-30

M/L [100521-113] US BREAKER INC
AP [111876-001] ZHEJIANG CHINT ELECTRICS CO LTD (NBK)

Products Covered	Report Date	Basic Applicant's (Supplier's) Product Designation	Multiple Listee's Product Designations
Magnetic contactors	2002-4-10	NC1-65 NC1-80 NC1-80 NC1-80 NC1-95 NC1-95 NC1-95	NC1D6508 NC1D8011 NC1D8004 NC1D8008 NC1D9511 NC1D9504 NC1D9508

MARKING: Same as that described in Follow-Up Service Procedure and/or Report except for Multiple Listee's name, ML Tradename, when applicable, and product designation.

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<u>Section</u>	<u>Product Covered</u>	<u>Report Date</u>
1	Magnetic Contactors - Models NC8-09, -12, -16, -25, -32 and -40. Listed Accessory - Auxiliary Contact - Model F4.	2001-04-23
2	Magnetic Reversing Contactors - Models CJX2 or NC1-09, -12, -18, -25, -32, -40, -50, -65, -80 and -95. Listed Accessory, Indicator: ND16 Series	2002-04-10
3	Magnetic Contactors - Model NC6-06 and NC6-09.	2002-06-17
4	Magnetic Contactors - Models NC2-115, -150, -185, -225, -265, -330, -400, -500, -630. Accessory Auxiliary Contact - Model F5	2006-04-12

File E205608
Project 05NK30570

April 12, 2006

REPORT

on

MOTOR CONTROLLERS, MAGNETIC

Chint Group Corp.
Wenzhou, Zhejiang, China

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DESCRIPTION

PRODUCT COVERED:

Magnetic Contactors - Models NC2-115, -150, -185, -225, and -265, -330, -400, -500, -630.

Accessory - Auxiliary Contact - Model F5.

GENERAL:

These devices are open type, magnetically operated, three and four pole contactors with normally open main contacts.

RATINGS:

Model	HP ratings	Rated Voltage (V)	FLA (A)	I _{th}	Phases
NC2-115	40	240	104	200A	3
	60	415	103		
	75	480	96		
	75	600	77		
NC2-150	50	240	130	200A	3
	75	415	128		
	100	480	124		
	100	600	99		
NC2-185	60	240	154	275A	3
	100	415	165		
	100	480	124		
	100	600	99		
NC2-225	75	240	192	275A	3
	125	415	208		
	125	480	156		
	125	600	125		
NC2-265	100	240	248	315A	3
	150	415	240		
	150	480	180		
	150	600	144		
Coil voltage	24~415VAC				

Auxiliary Contacts: Model F5 rated B600

Short Circuit Rating - 10,000 A, 600 V ac

SURROUNDING AIR TEMPERATURE RATINGS: +55C MAX.

RATINGS (Cont'd):

Model	HP ratings	Rated Voltage (V)	FLA (A)	Ith	Phases
NC2-330	125	240	312	380A	3
	150	415	240		
	200	480	240		
	200	600	192		
NC2-400	150	240	360	450A	3
	200	415	320		
	250	480	302		
	300	600	289		
*NC2-500	200	240	480	630A	3
	250	415	403		
	350	480	414		
	350	600	336		
*NC2-630	250	240	604	800A	3
	350	415	560		
	400	480	477		
	500	600	472		
Coil voltage	24~415VAC				

Auxiliary Contacts: Model F5 rated B600

Short Circuit Rating - 18,000 A, 600 V ac max for over 200 HP to 400 HP

Short Circuit Rating - 30,000 A, 600 V ac max for over 400 HP to 500 HP

SURROUNDING AIR TEMPERATURE RATINGS: +55C MAX.

NOMENCLATURE:

$$\frac{N}{I} \quad \frac{C}{II} \quad \frac{2}{III} - \frac{XXX}{IV} \quad \frac{X}{V} / \frac{X}{VI}$$

I - Company code

II - Designation

C - AC contactor

III - Sequence

2 - Design sequence No.

IV - Current Rating

XXX - Rated operational current

V - Derivation code

N - Reversible Contactor

Ns - Horizontal mounting

Nc - Vertical mounting

J - Electricity-saving type (for 330A or more, can be omitted)

VI - Number of poles

2P - Two poles

4P - Four poles

blank - Three poles

CONSTRUCTION DETAILS:

General - Reference may be made to accompanying photographs and itemized descriptive pages for the essential details of construction.

Corrosion Protection - All parts of the device are constructed of corrosion resistant material or are suitably plated or painted as a protection against corrosion.

Tolerance - Unless specified otherwise, the indicated dimensions are nominal.

Marking - Ink-stamped adhesive backed labels secured to or printed on the devices designated with the Listee's name or file number, model number, rated 94-V0, 130C in volts, amperes, the number of phases, and, if necessary the frequency. Devices may be marked appropriately for the intended use; in amperes, volt-amperes or watts, horsepower, or any combination thereof.

"60/75°C, Cu wire only", or equivalent.

"Terminal Torque 35 in.-lbs (see Ratings)", or equivalent. Torque marking may be provided loose with the equipment.

* Short Circuit Marking - "Suitable For Use On A Circuit Capable Delivering Not More Than **30,000** rms Symmetrical Amperes, 600 Volts Maximum. When Protected by UL Listed Fuses", or equivalent.

Model	BCP Max Value (A)
NC2-115	250
NC2-150	300
*NC2-185	350
*NC2-225	450
NC2-265	500
NC2-330	601
NC2-400	601
NC2-500	700
NC2-630	800

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

USL - Complies with UL 508, Seventeenth Edition.

CNL - Complies with CSA C22.2 No. 14-2005.

Spacings - Spacings were evaluated per Table 36.1 of UL 508, the Standard for Industrial Control Equipment, Seventeenth Edition.

Used in a Pollution Degree 2 or better environment.

General - Covers models NC2-115~265 models unless specified below.

1. Base - R/C (QMFZ2), Industrial Dielectrics Inc., designated 46-12, with minimum thickness 3.0 mm., overall 124mm x 103mm x 41mm (NC2-115~150), 126mm x 108.6mm x 42.6mm (NC2-185~225), 143 mm x 130mm x 38.5mm (NC2-265)

Alternative - same as above, except HANGZHOU JIEMIN ELECTRONIC CHEMICAL CO LTD, designated JM-800

Alternate - same as above, except HONGTAI ELECTRICAL APPARATUS CO LTD, designated BMC31

2. Contact support - R/C (QMFZ2), GUILIN CONINST ELECTRICAL & ELECTRONIC MATERIAL CO LTD, designated MU-100, with minimum thickness 3.0 mm., overall 134.2mm x 50.5mm x 48.7mm (NC2-115~150), 146mm x 59mm x 76.4mm (NC2-185~225), 42 mm x 41mm x 66 mm (NC2-265)

Alternative - same as above, except CHANG CHUN PLASTICS CO LTD, designated T200NA or T375J

Alternative - same as above, except HONGTAI ELECTRICAL APPARATUS CO LTD, designated BMC31

Alternative - same as above, except HANGZHOU JIEMIN ELECTRONIC CHEMICAL CO LTD, designated JM-800

3. Bobbin - R/C (QMFZ2), BASF, designated A3X2G5(B), with minimum thickness 0.81mm, overall 60.5mm x 55.5mm x 51.5mm (NC2-115~150), 68.2mm x 58mm x 52.1mm (NC2-185~225), 79.6 mm x 70mm x 59mm (NC2-265).

Alternative - same as above, except RHODIA ENGINEERING PLASTICS, designated A20V35

4. Top cover - R/C (QMFZ2), Zhejiang Juner High Polymer Materials Co.Ltd., designated PA-A6, with minimum thickness 1.5 mm, overall 121.5mm x 101mm x 12.5mm (NC2-115~150), 124.4mm x 108.6mm x 11.4mm (NC2-185~225), 145 mm x 128.4mm x 12.5mm (NC2-265)

Alternative - same as above, except DSM ENGINEERING PLASTICS B V, designated K222-KGV4.

5. Arc-extinguish cover - R/C (QMFZ2), Industrial Dielectrics Inc., designated 46-12, with minimum thickness 3.0 mm., overall 124mm x 103mm x 57.5mm (NC2-115~150), 126mm x 108.6mm x 62 mm (NC2-185~225), 146.5 mm x 130mm x 66.6 mm (NC2-265)

Alternative - same as above, except HANGZHOU JIEMIN ELECTRONIC CHEMICAL CO LTD, designated JM-800.

Alternative - same as above, except HONGTAI ELECTRICAL APPARATUS CO LTD, designated BMC31.

Current-carrying parts NC2-115~150

1. Conducting strip - copper T3 Y₂, with thickness 1.5mm, measuring 35.5mm by 8.5mm by 1.5mm
2. Contact plate - copper designated T3 Y₂ with thickness 3.0mm, measuring 88.6 mm by 11.5mm by 3mm
3. Slice - cold-rolled electric steel strap designated DW360 with thickness 0.5mm, measuring 93.5mm by 13mm by 0.5mm
4. Spring - spring steel wire designated 70-C, with thickness 1.1mm.
5. Coil - enameled copper wire designated QZ-2/155, with thickness $\varnothing 0.28\text{mm}-\varnothing 0.53\text{mm}$

NC2-185~225

1. Conducting strip - copper T3 Y₂, with thickness 1.5mm, measuring 37 mm by 9 mm by 1.5mm
2. Contact plate - copper designated T3 Y₂ with thickness 3.0mm, measuring 100mm by 13mm by 3mm
3. Slice - cold-rolled electric steel strap designated DW360 with thickness 0.5mm, measuring 100mm by 14mm by 0.5mm

4. Spring - spring steel wire designated 70-C, measuring by 1.2mm
- * 5. Coil - enameled wire designated QZ-2/155, with thickness **$\phi 0.27\text{mm}-\phi 0.53\text{mm}$**

Model NC2-265

1. Conducting strip - copper T3 Y₂, with thickness 2.0mm, measuring 44 mm by 11.5 mm by 2 mm
2. Contact plate - copper designated T3 Y₂ with thickness 4.0mm, measuring 113.6mm by 15mm by 4mm
3. Slice - cold-rolled electric steel strap designated DW360 with thickness 0.5mm, measuring 120mm by 18mm by 0.5mm
4. Spring - spring steel wire designated 70-C, measuring 1.4mm
- * 5. Coil - enameled wire designated QZ-2/155, with thickness **$\phi 0.42\text{mm}-\phi 0.77\text{mm}$**

Model NC2-115

1. Moving contact - Ag-SnO₂(9)-In₂O₃(4)-T/Ag, measuring 11mm by 8mm by 2.1mm
2. Still contact - Ag-SnO₂(9)-In₂O₃(4)-T/Ag, measuring 11mm by 8.5mm by 2mm

NC2-150

1. Moving contact - Ag-SnO₂(9)-In₂O₃(4)-T/Ag, measuring 11mm by 8mm by 2.1mm
2. Still contact - Ag-SnO₂(9)-In₂O₃(4)-T/Ag, measuring 11mm by 8.8mm by 2mm

NC2-185~225

1. Moving contact - Ag-SnO₂(9)-In₂O₃(4)-T/Ag, measuring 12.6mm by 9.6mm by 2.5mm
2. Still contact - Ag-SnO₂(9)-In₂O₃(4)-T/Ag, measuring 13mm by 10 mm by 2.1mm

Model NC2-265

- * 1. Moving contact - Ag-SnO₂(9)-In₂O₃(4)-T/Ag , measuring **14.5mm by 10.6mm by 2.7mm**
- 2. Still contact - Ag-SnO₂(9)-In₂O₃(4)-T/Ag , measuring 15mm by 11mm by 2.3mm

*

General - Covers models NC2-330~630 unless specified below.

1. Base - R/C (QMFZ2), Industrial Dielectrics Inc., designated 46-12,

NC2-330~400: with minimum thickness 3.0 mm., overall 158mm×145mm×35.8mm

NC2-500: with minimum thickness 1.5 mm., overall 172mm×164.5mm×38.5mm

NC2-630: with minimum thickness 1.5 mm., overall 203mm×79.5mm×50.5mm

Alternative - same as above, except HANGZHOU JIEMIN ELECTRONIC CHEMICAL CO LTD, designated JM-800

Alternative - same as above, except HONGTAI ELECTRICAL APPARATUS CO LTD, designated BMC31

2. Contact support - R/C (QMFZ2), Industrial Dielectrics Inc., designated 46-12

NC2-330~400: with minimum thickness 2.0 mm., overall 45mm×41mm×65.1mm

NC2-500: with minimum thickness 2.0 mm., overall 45mm×41mm×69.8mm

NC2-630: with minimum thickness 2.0 mm., overall 55.5mm×45mm×80.3mm

*

Alternative - same as above, except HONGTAI ELECTRICAL APPARATUS CO LTD, designated BMC31

3. Bobbin - R/C (QMFZ2), BASF, designated A3X2G5, generic material PA66, with minimum thickness 1mm

NC2-330: overall dimension 79.6mm×70mm×59mm

NC2-400: overall dimension 83.5mm×72.2mm×62.1mm

NC2-500: overall dimension 88mm×84mm×61.5mm

NC2-630: overall dimension 100.5mm×83.5mm×61mm

Alternative - same as above, except RHODIA ENGINEERING PLASTICS, designated A20V35, generic material PA66.

- * 4. Top cover - R/C (QMFZ2), Zhejiang Juner High Polymer Materials Co.Ltd., designated PA-A6, generic material PA66, with minimum thickness 0.75mm

NC2-330~400: overall dimension 157mm×143mm×8.5mm

NC2-500: overall dimension 170mm×162.5mm×8mm

NC2-630: overall dimension 199mm×52.5mm×10mm

Alternative - same as above, except DSM ENGINEERING PLASTICS B V, designated K222-KGV4.

5. Arc-extinguish cover -R/C (QMFZ2), Industrial Dielectrics Inc., designated 46-12

NC2-330~400: with minimum thickness 2.8mm, overall 158mm×146mm×67.5mm

NC2-500: with minimum thickness 2.8 mm., overall 172mm×165mm×80mm

NC2-630: with minimum thickness 2.8 mm., overall 202.5mm×79.5mm×102mm

Alternative - same as above, except HANGZHOU JIEMIN ELECTRONIC CHEMICAL CO LTD, designated JM-800

Alternative - same as above, except HONGTAI ELECTRICAL APPARATUS CO LTD, designated BMC31

Current-carrying parts NC2-330~400

1. Conducting strip - copper T3 Y2, measuring 52mm by 13mm by 3.5mm
2. Contact plate - copper designated T3 Y2, measuring 103 mm by 18.2mm by 4mm
3. Spring - spring steel wire designated 70-C, with thickness 1.5mm
4. Coil - enameled copper wire designated QAN-1B/180 with thickness 0.09mm-0.18mm and QZ-2/155 with thickness 0.27mm-0.49mm
5. Moving contact - Ag-SnO₂(9)-In₂O₃(4)-T/Ag, measuring 17.8mm by 12.4mm by 2.5mm
6. Still contact - Ag-SnO₂(9)-In₂O₃(4)-T/Ag, measuring 18mm by 13mm by 2.5mm

NC2-500

1. Conducting strip - copper T3 Y2, measuring 64.5mm by 16.5mm by 5mm
2. Contact plate - copper designated T3 Y2, measuring 114.3 mm by 22.5mm by 5 mm
3. Spring - spring steel wire designated 70-C, with thickness 2 mm.
4. Coil - enameled copper wire designated QAN-1B/180 with thickness 0.12mm-0.25mm and QZ-2/155 with thickness 0.31mm-0.63mm
5. Moving contact - Ag-SnO₂(9)-In₂O₃(4)-T/Ag, measuring 22mm by 15.7mm by 3mm
6. Still contact - Ag-SnO₂(9)-In₂O₃(4)-T/Ag, measuring 22 mm by 16 mm by 2.5mm

Model NC2-630

1. Conducting strip - copper T3 Y2, measuring 77 mm by 15mm by 10mm
2. Contact plate - copper designated T3 Y2, measuring 137.5 mm by 26mm by 7 mm
3. Spring - spring steel wire designated 70-C, with thickness 1.4 mm or 1.8mm.
4. Coil - enameled copper wire designated QAN-1B/180 with thickness 0.1mm-0.2mm mm and QZ-2/155 with thickness 0.33mm-0.63mm
5. Moving contact - Ag-SnO₂(9)-In₂O₃(4)-T/Ag, measuring 21mm by 18 mm by 3mm
6. Still contact - Ag-SnO₂(9)-In₂O₃(4)-T/Ag, measuring 25 mm by 17 mm by 2.5mm

F5 Auxiliary Contact

1. Base - R/C (QMFZ2), DUPOND, designated FR50, with minimum thickness 0.75mm, overall 45 x 41.5x 37mm

Alternate - same as above, except Zhejiang Juner New Materials Co.Ltd., designated PA66-301-GM.

Alternate - same as above, except Beijing Meichen Co.Ltd., designated PA66-225FR.

Alternate - R/C (QMFZ2), BASF, designated A3X2G5, with minimum thickness 0.81mm, overall 45 x 41.5x 37mm

2. Control support -R/C (QMFZ2), DUPOND, designated FR50, with minimum thickness 0.75mm, overall 37.5 x 11x 21.5mm

Alternate - R/C (QMFZ2), BASF, designated A3X2G5, with minimum thickness 0.81mm, overall 37.5 x 11x 21.5mm

3. Foundation - R/C (QMFZ2), BASF, designated A3X2G5(B), with minimum thickness 0.81mm, overall 45 x 48 x 32mm

Alternate - R/C (QMFZ2), DUPOND, designated FR50, with minimum thickness 0.75mm, overall 45 x 48 x 32mm

4. Contact bridge - bronze sheet steel, designated QSn6.5-0.1Y₂, measuring by 4 mm by 0.5mm
5. Contact plate - brass plate, designated H62Y₂, measuring by 5mm by 1.2mm
6. Spring - stainless spring steel wire, designated 1Cr18Ni9, with thickness 0.25mm
7. Contact - AgNi(10)/Cu, measuring 4mm by 0.8mm
8. Contact- AgNi(10)/Cu, measuring 4mm by 0.8mm

The following items are for the NC2-115~265-N (reversing models)

1. Interlock part - R/C(QMFZ2) , Zhejiang Juner, designated PA66-301-GM40-H.
with min. thickness 2.5mm, overall 107 x 45.5 x 27.5mm(NC2-115~150)
with min. thickness 2.5mm, overall 108 x 49.5 x 27.5mm(NC2-185~225)
with min. thickness 3 mm, overall 126 x 69.5 x 35.5mm(NC2-265)

2. Bottom plate - steel , designated Q235-A.F, measured by
350mm by 20mm by 10mm(NC2-115~225)
450mm by 20mm by 10mm(NC2-265)

3. Sheath - hard-drawn round steel, designated Q235-A.F, measured by
φ12mm by 8mm(NC2-115~225)
φ12mm by 14.5mm (NC2-265)

4. Linkage bar(1) - copper , designated T3, measured by
90 by 20 by 4 by φ6.5mm (NC2-115)
90 by 20 by 4 by φ8.5mm (NC2-150~185)
79 by 25 by 4 by φ10.5mm (NC2-225)
120 by 25 by 5 by φ10.5mm (NC2-265)

5. Linkage bar(2) - copper , designated T3, measured by
170 by 29 by 20 by φ6.5mm (NC2-115)