

APPLICATION		REVISIONS			
NEXT ASSY	USED ON	LTR	DESCRIPTION	DATE	APPROVAL
	MBCS	-	DRAWING RELEASED	09-07-28	J. PASEK
	MBCS	A	RN N62A7 incorporated. See sheet 10 for details of revisions. 09-11-23 DAN	09-12-10	K. Stuart
	MBCS	B	RN P30L8 incorporated. See sheet 10 for details of revisions. 10-12-02 DAF	11-02-25	K. Sidlovsky
	MBCS	C	RN AV7T9 incorporated. See sheet 10 for details of revisions. 16-05-05 DAF	16-05-26	D. Lamb

PRODUCT STRUCTURE IN ISE

ALL SHEETS CARRY THE SAME REVISION LEVEL

Contract No:
N00024-95-C-4030

Date of Original Dwg:
09-07-24

Northrop Grumman Corporation
Power/Control Systems
Sykesville, Maryland 21784-5101

Originator K. Stuart	Checked D. Kennedy	Appd J. Hutter
-------------------------	-----------------------	-------------------

Appd K. Stuart	Appd D. Wilson	Appd M. Mulhern
-------------------	-------------------	--------------------

SOURCE CONTROL DRAWING,
RELAY

DESIGN ACTIVITY APPROVAL
K. Sidlovsky

M. Solomon/R. Hiltz
PROCURING ACTIVITY APPROVAL

SIZE
A

CAGE CODE
04804

REV.
C

DWG. NO.
4A48857

SHEET
1 OF 10

TABLE OF CONTENTS

1-0	INTRODUCTION	3
1-1	Intended Use	3
1-2	Part Numbers and Approved Source of Supply	3
2-0	PHYSICAL CHARACTERISTICS AND PERFORMANCE PARAMETERS	4
2-1	Physical Characteristics	4
2-2	Performance Parameters	5
2-3	Contact Construction	6
3-0	MARKINGS	7
4-0	Certificate of Compliance (C of C)	8
5-0	Packing and Shipping	9

LIST OF TABLES

Table 1-1	Part Numbers for the Relay	3
Table 1-2	Approved Source of Supply for the Relay	3
Table 2-1	Performance Parameters for the Relay	5

LIST OF FIGURES

Figure 2-1	Physical Characteristics for the Relay	4
Figure 2-2	Schematic Diagram for the Relay	5
Figure 2-3	Hot Switch Rating for the Relay	6

SIZE	CAGE CODE	REV	DWG. NO.	SHEET
A	04804	C	4A48857	2

1-0 INTRODUCTION

This drawing provides the minimum requirements for the procurement of the relay listed herein.

This drawing also exclusively provides the applicable performance characteristics, installation characteristics, interchangeability characteristics, and quality-assurance provisions for at least one specific application.

1-1 Intended Use

The relay specified herein is intended for use in Navy shipboard applications. Only the relay described herein, when procured from the supplier listed herein, is approved by Northrop Grumman, Power/Control Systems for the specified applications. A substitute relay shall not be used without prior approval by Northrop Grumman, Power/Control Systems or the Government Procuring Activity (GPA).

Identification of the approved source of supply herein is not to be construed as a guarantee of present, or continued, availability as a source of supply for the relay described herein.

If a conflict occurs between this drawing and any reference herein, this drawing shall take precedence.

1-2 Part Numbers and Approved Source of Supply

The part numbers for the relay are listed in table 1-1. The approved source of supply for the relay is listed in table 1-2.

TABLE 1-1 - PART NUMBERS FOR THE RELAY

NORTHROP GRUMMAN PART NUMBERS	SUPPLIER'S PART NUMBERS
4A48857H01	KC-14/S1
4A48857H02	KC-14/S2

TABLE 1-2 - APPROVED SOURCE OF SUPPLY FOR THE RELAY

NORTHROP GRUMMAN PART NUMBERS	APPROVED SUPPLIER	CAGE CODE
4A48857H01	Kilovac Division of TYCO Electronic Corp.	18741
4A48857H02	Kilovac Division of TYCO Electronic Corp.	18741

58614

SIZE	CAGE CODE	REV	DWG. NO.	SHEET
A	04804	C	4A48857	3

2-0 PHYSICAL CHARACTERISTICS AND PERFORMANCE PARAMETERS

2-1 Physical Characteristics

The relay shall be of the same physical size and construction as the Kilovac KC-14 relay, based on the release date of this drawing, except as specified herein. Any deviation from the following relay features shall require the prior approval of Northrop Grumman, Power Control Systems.

NORTHROP GRUMMAN PART NUMBERS	SUPPLIER'S PART NUMBERS	AWG #12, 1000V WIRE PART NUMBERS	COLORS
4A48857H01	KC-14/S1	M22759/9-12-9	WHITE
4A48857H02	KC-14/S2	M22759/9-12-6	BLUE

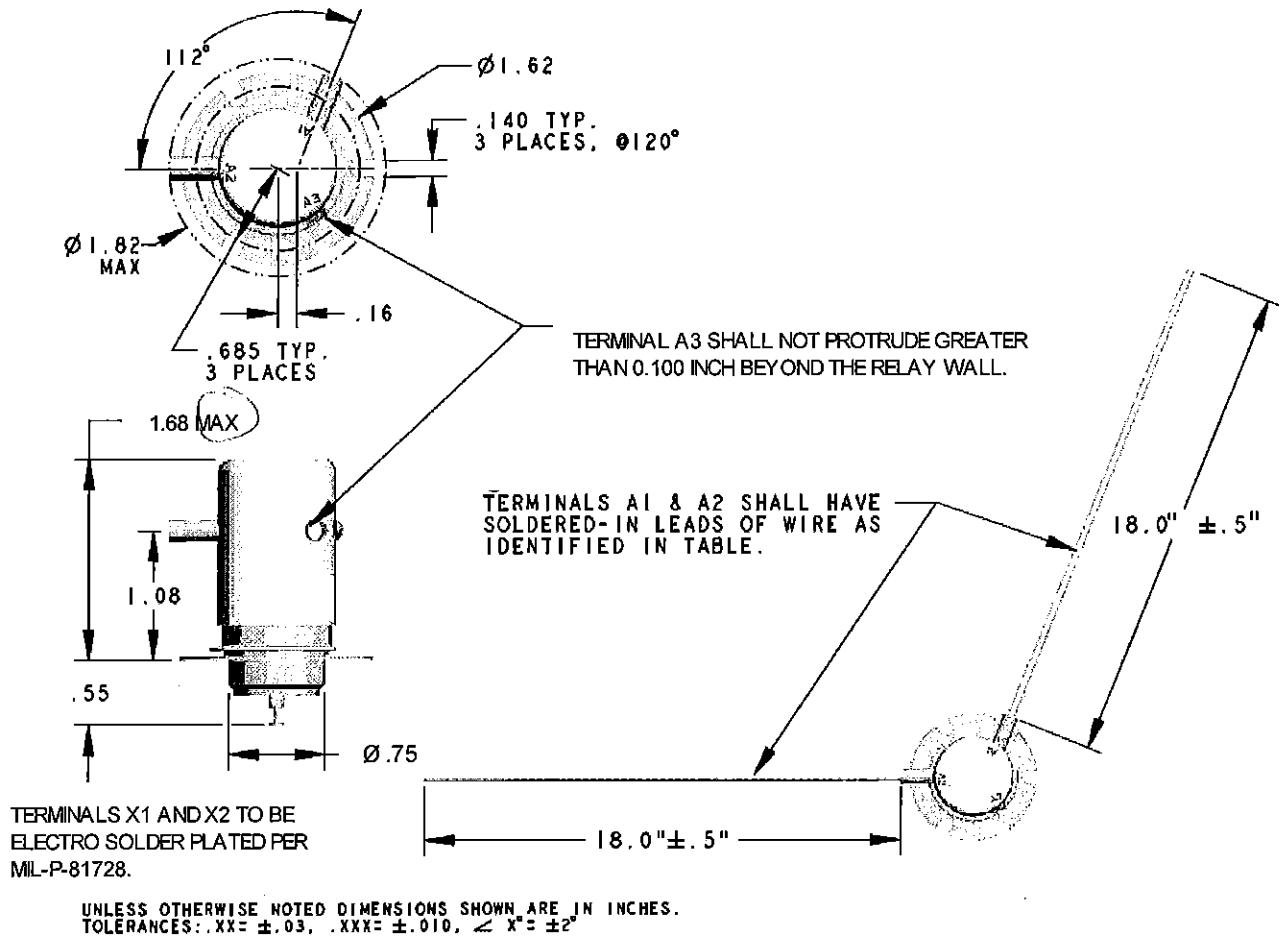


Figure 2-1. Physical Characteristics for the Relay

SIZE	CAGE CODE	REV	DWG. NO.	SHEET
A	04804	C	4A48857	4

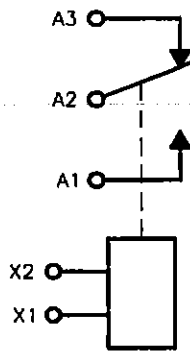


Figure 2-2. Schematic Diagram for the Relay

2-2 Performance Parameters

The relay shall be rated at a temperature of 25°C, at sea level, with the base grounded. The performance parameters are listed in table 2-1.

TABLE 2-1 - PERFORMANCE PARAMETERS FOR THE RELAY

PARAMETERS	VALUE/COMMENTS
Contact Arrangement	Single Pole Double Throw (SPDT)
Test Voltage (DC at 60 Hz Peak)	17 kVdc
Rated Operating Voltage (DC at 60 Hz)	15 kVdc
Minimum Insulation Resistance at 500 Vdc	100 MΩ
Continuous Current Carry, Maximum DC at 60 Hz (rms)	30 A (rms)
Coil Hi-Pot Voltage (rms) at 60 Hz	500 Vrms
Contact Capacitance, Between Open Contacts	0.5 pF
Contact Capacitance, Open Contacts to Ground	1.0 pF
Maximum Contact Resistance	0.025 Ω
Maximum Operating Time	15 ms
Maximum Release Time	9 ms
Shock, 11 ms, ½ Sine (Peak)	50 G
Vibration, 10 G Peak	55 to 500 Hz
Operating Temperature Range	-55 to 125°C
Mechanical Life	1x10 ⁶ Cycles
Switching Life	(Refer to Figure 2-3)
Maximum Weight	3 oz
Nominal Coil Voltage	26.5 Vdc
Maximum Pick-Up Voltage	16 Vdc
Drop-Out Voltage	1 to 10 Vdc
Coil Resistance	162 to 198 Ω

NOTE 1 – MEASURE CONTACT RESISTANCE AT RELAY CONTACTS DIRECTLY, NOT AT WIRE ENDS.

SIZE	CAGE CODE	REV	DWG. NO.	SHEET
A	04804	C	4A48857	5

Contact Construction

The coil terminal mechanical construction shall be identical to the KC-14 in a form-fit and function, using solid 1-piece (non-composite) turret terminal pins.

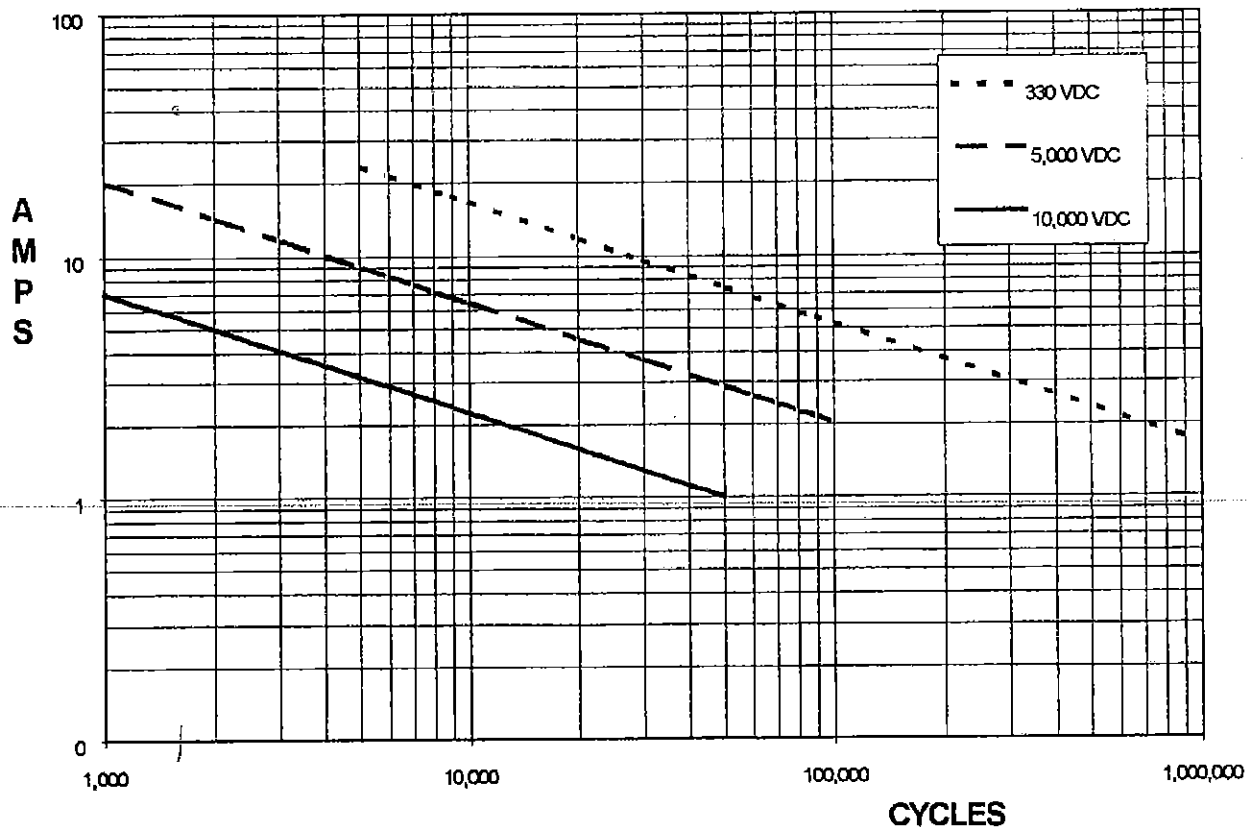


Figure 2-3. Hot Switch Rating for the Relay

SIZE	CAGE CODE	REV	DWG. NO.	SHEET
A	04804	C	4A48857	6

3-0

MARKINGS

Each relay to be shipped shall be marked with the applicable Northrop Grumman part number (4A48857H01 or 4A48857H02).

Terminals A1 and A2 shall be marked at a minimum. Terminal A3 may be marked but is not required to be marked.

Additional markings are not required.

All markings shall be legible, permanent, and smudgeproof.

SIZE	CAGE CODE	REV	DWG. NO.	SHEET
A	04804	C	4A48857	7

4-0

CERTIFICATE OF COMPLIANCE (C OF C)

The manufacturer shall provide a Certificate of Compliance for each relay that is being shipped.

At a minimum, this Certificate of Compliance shall certify the following items:

1. Manufacturer's (or distributor's) name and address.
2. Manufacturer's part number.
3. Lot identification code.
4. A statement that certifies product conformance and traceability.
5. An authorized signature and the effective date.

SIZE	CAGE CODE	REV	DWG. NO.	SHEET
A	04804	C	4A48857	8

5-0

PACKING AND SHIPPING

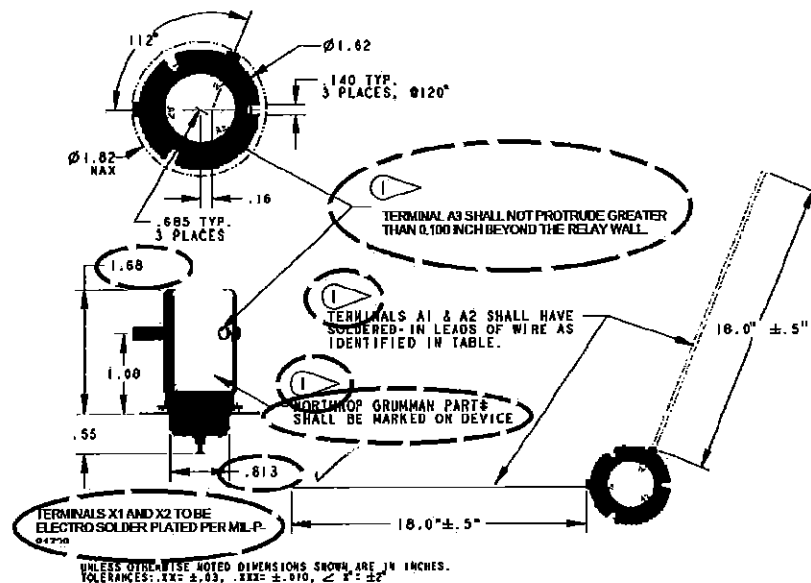
Each lot of relays shall be packaged and shipped in a manner that will prevent damage to the relay.

SIZE	CAGE CODE	REV	DWG. NO.	SHEET
A	04804	C	4A48857	9

DETAILS OF REVISIONS

- Revision A - RN N62A7 incorporated.
 Sheet 1 - Added revision.
 Sheet 2 - Updated the table of contents.
 Sheet 6 - Added paragraph 2-3.
 Sheet 8 - Added section 4-0.
 Sheet 9 - Added section 5-0.
 Sheet 10 - Updated the details of revisions.
-
- Revision B - RN P30L8 incorporated
 Sheet 1 - Added revision
 Sheet 4 - Figure 2-1; 1 Was: "A cap or plug shall be used in place of terminal A3, such that it does not protrude significantly from the device."
 Added the following at the bottom of figure 2-1:
 TERMINALS X1 AND X2 TO BE ELECTRO SOLDER PLATED PER MIL-P-81728.
 Sheet 10 - Updated the details of revisions.
-

- Revision C - RN AV7T9 incorporated.
 Sheet 1 - Added revision
 Sheet 4 - Figure 2-1 was:



- Sheet 7 - Para. 3-0; added 2nd paragraph: "Terminals A1 and A2 shall be marked at a minimum. Terminal A3 may be marked but is not required to be marked."
 Sheet 10 - Updated the details of revisions.
-

SIZE	CAGE CODE	REV	DWG. NO.	SHEET
A	04804	C	4A48857	10