METRIC
A-A-50631
9 February 1995

COMMERCIAL ITEM DESCRIPTION

BUS FAILURE ALARM, ELECTRICAL, SHIPBOARD

The General Services Administration has authorized the use of this commercial item description for all Federal Agencies.

1. Abstract. This commercial item description covers various types of bus failure alarms for naval ships.

2. Salient characteristics.

2.1 Mounting. Bus failure alarms shall be capable of bulkhead, panel, console, or internal mounting as specified (see 6.1).

2.2 Enclosure. Bus failure alarms shall be dripproof or explosionproof as specified (see 6.1).

2.2.1 Dripproof enclosure. An enclosure in which the openings are so constructed that drops of liquid or solid particles falling on the enclosure at any angle not greater than 15 degrees from the vertical either cannot enter the enclosure, or if they do enter the enclosure, they will not prevent the successful operation of, or cause damage to, the enclosed equipment (see IEEE 45).

2.2.2 Explosionproof enclosure. Explosionproof enclosures shall be approved for operation in accordance with NFPA 70, class 1, group D, division 2, hazardous areas.

beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commander, SEA 03R42, Naval Sea Systems Command, 2531 Jefferson Davis Hwy, Arlington, VA 22242-5160 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A FSC 6350

2.2.3 Grounding and bonding. Metallic enclosures shall be provided with a stud for grounding and bonding. Resistance between tip of the stud and any point of the enclosure or any exposed metallic components shall be zero ohms when measured with a high quality ohmmeter. The stud shall be placed on the left side of the enclosure when viewed from the front of the bus failure alarm. Bus failure alarms designed for panel, console, or internal mounting do not require a stud for grounding and bonding, but must ensure that all metallic components will not create a shock hazard to personnel after installation.

2.3 Electrical isolation. Electrical components shall be electrically isolated from the enclosure or any exposed metallic components. Electrical isolation shall be 100 megohm or greater when measured with a high quality, 500-volt megger.

2.4 Types. Bus failure alarms shall be capable of single-phase or direct current, or three-phase voltage detection as specified (see 6.1).

2.4.1 Single-phase or direct current. The single-phase root mean square (rms) or direct current (dc) bus failure alarm shall be a self contained unit providing an audible and visual indication when the monitored voltage falls below 50 to 70 volts DC or rms. The bus failure alarm shall also provide an indication of normal voltage available. The bus failure alarm shall monitor dc or rms without modification and without observing polarity of the dc voltage. The audio shall provide an output of 88 decibel (dB) for 15 minutes without external power, be capable of being silenced, and auto reset to normal when the monitored voltage exceeds 75 to 90 volts. The visual indicator shall remain alarmed until manually reset.

Sound pressure output shall be based on a reference of 20 micropascal (μPa), and shall be measured at a distance of 3 meters (m) from the bus failure alarm in accordance with ANSI S1.13.

2.4.2 Three-phase. The three-phase bus failure alarm shall be capable of monitoring 115 or 440 volts rms with an operating frequency of 60 or 400 hertz (Hz). The bus failure alarm shall have an adjustable time delay for dropout or recovery from 0 to 10 seconds, and provide a solid state or relay output for an extension alarm capable of at least 5 amperes when the monitored voltage falls at least 15 percent. The accuracy of the bus failure alarm shall be at least 1 percent.

2.5 Construction. Construction shall be such that no special tools are required for disassembly or reassembly.

2.6 Preservation. Parts shall be of suitable corrosion resistant material or materials treated in a satisfactory manner to render them adequately resistant to corrosion.

3. Quality assurance provisions.

3.1 Contractor certification. The contractor shall certify and maintain substantiating evidence that the product offered meets the salient characteristics of this commercial item description and that the product conforms to the producer's own drawings, specifications, standards, and quality assurance practices. The Government reserves the right to require proof of such conformance prior to the first delivery and thereafter as may be otherwise provided for under the provisions of the contract.

3.2 Regulatory requirements. The offerer/contractor is encouraged to use recovered materials in accordance with Public Law 94-580 to the maximum extent practical.

4. Preservation, packaging, packing, labeling, and marking. The preservation, packaging, packing, labeling, and marking shall be as specified in the contract or order.

5. CID based part identification number. The following part identification numbering procedure is for Government purposes and does not constitute a requirement for the contractor.

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A-A-50631 - PES46          Example of part identification.
|     |     |
|     |     |_____________ Variable characteristics
|     |                       P = mounting type
|     |                       E = enclosure type
|     |                       S = type of alarm
|     |                       4 = operating voltage
|     |                       6 = operating frequency
|     |_____________________ CID number
|_____________________________ Designated commercial item description (CID)
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6. Notes.

6.1 Acquisition requirements. Acquisition documents must specify the following:

(a) Mounting.
- B = Bulkhead
- P = Panel
- C = Console
- I = Internal

(b) Enclosure.
- D = Dripproof
- E = Explosionproof

(c) Type.
S = Single-phase or Direct current
T = Three-phase
1 = 115 volts
4 = 440 volts
6 = 60 Hz
4 = 400 Hz

6.2 Documents.

(a) NFPA-70, National Electrical Code, is available from National Fire Protection Association, One Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101.
(b) ANSI S1.13, Methods for Measurement of Sound Pressure Levels, is available from American National Standards Institute, 11 West 42nd Street, 13th Floor, New York, NY 10036.
(c) IEEE 45, Recommended Practice for Electric Installations on Shipboard, is available from Institute of Electrical and Electronic Engineers, Inc., 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331.

CIVIL AGENCY COORDINATION ACTIVITY:
GSA - FSS

Preparing activity:
Navy - SH
(Project 6350-0141)

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the comment number and revision letter should be given.

2. The submitter of this form must complete blocks 4, 5, 6, and 7.

The preparing activity must provide a reply within 30 days from receipt of this form.

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

I RECOMMEND A CHANGE:	1. DOCUMENT NUMBER A-A-50631	2. DOCUMENT DATE (YYMMDD) 950209

3. DOCUMENT TITLE
BUS FAILURE ALARM, ELECTRICAL, SHIPBOARD

4. NATURE OF CHANGE (identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)

5. REASON FOR RECOMMENDATION

6. SUBMITTER

a. NAME (Last, First, Middle Initial)	b. ORGANIZATION	
c. ADDRESS (include Zip Code)	d. TELEPHONE (Include Area Code) (1) Commercial (2) DSN (if applicable)	7. DATE SUBMITTED (YYMMDD)

8. PREPARING ACTIVITY

a. NAME Technical Point of Contact (TPOC) MR. MARK GOUMAS, SEA 03K32 ADDRESS ALL CORRESPONDENCE AS FOLLOWS:	b. TELEPHONE (Include Area Code) (1) Commercial: DSN: TPOC: 703-602-7191 8-332-7191
c. ADDRESS (Include Zip Code) COMMANDER, NAVAL SEA SYSTEMS COMMAND ATTN: SEA 03R42 2531 JEFFERSON DAVIS HIGHWAY ARLINGTON, VA 22242-5160	IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT: Defense Quality and Standardization Office 5203 Leesburg Pike, Suite 1403 Falls Church, VA 22041-3466 Telephone 703-756-2340 DSN 289-2340