

MIL-S-17000/9A(SH)

2 May 1983

SUPERSEDING

MIL-S-17000/9(SH)

30 April 1980

MILITARY SPECIFICATION SHEET

Ⓐ

SWITCHING EQUIPMENT, COMBAT SYSTEM, COMMAND AND CONTROL  
FIRE CONTROL AND INTERIOR COMMUNICATION CONTROL INDICATOR

This specification sheet is approved for use by the Navel Sea Systems Command, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

The complete requirements for acquiring the control indicators described herein shall consist of this document and the latest issue of MIL-S-17000.

REQUIREMENTS:

Enclosure: Enclosure shall be of sheet aluminum construction in accordance with figure 1.

Mounting: Enclosure shall have two mounting feet at the top and one mounting foot at the bottom.

Accessibility: Front panel shall be hinged at the bottom of the enclosure. Lamps shall be removable without necessity of removal of the lampholder from the front panel.

Arrangement and enclosure size: Arrangement of the front panel and enclosure size (see figure 1) shall be as specified in the acquisition technical data package.

Cable entrance: Cable entrance for ship cables shall be from the bottom of the enclosure and shall be by one of the following methods as specified in the acquisition technical data package.

- (a) Connectors in accordance with MIL-C-5015 mounted on a removable plate.
- (b) Multi-cable transit in accordance with sheets 171-180 of section 4 of Drawing 803-5601027. Due to variation in cable sizes entering most unit enclosures, the stay plates and insert blocks will be furnished by the installing activity rather than by equipment manufacturer.

Ⓐ denotes changes.

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- (c) Stuffing tubes mounted on a removable cable entrance plate.  
Stuffing tubes will be furnished by the installing activity.

Space shall be provided inside the enclosure so that the ship wiring will not be crushed or distorted when the internal subassembly is mounted in the enclosure. Connector or stuffing tubes shall be used where up to four cables are required and multi-cable transit shall be used where more than four cables are required.

Gasket: Gaskets shall be in accordance with the following:

- (a) For static seals (between unit case and cover) gaskets, O ring, in accordance with MIL-P-25732 shall be used. For square or rectangular enclosures, the inside radius of the O ring at the corners of the enclosure shall be 1/2 inch minimum. Gaskets shall be lubricated with a compound in accordance with MIL-S-8660.
- (b) For reciprocating motion seals (pushbutton shafts) and for rotary motion seals (illumination rheostat shafts or operating knob shafts where the rotational speed is less than 10 revolutions per minute (r/min)) gaskets, O ring, in accordance with MIL-P-25732 shall be used. Gaskets shall be lubricated with a compound in accordance with MIL-S-8660. Clearances and other installation data as specified in MIL-G-5514 shall be used. The O ring retaining groove shall be cut in the shaft. Where lubrication in service is required, it shall be provided as specified for pneumatic seals in MIL-G5514.
- (c) where the use of O rings is not practicable, gasket materials shall be in accordance with MIL-R-2765 (oil resistant) or class I of MIL-R-15624 for other than low temperature (minus 20°F minimum) applications.
- (d) For round dial windows, gaskets shall be of a continuous band of a circumference less than the glass and shall be so arranged that when stretched over the glass the material will form over the edge and the faces of the glass to form a "U" shaped gasket.

Dials and pointers: Dials and pointers (for other than voltmeters) shall be of plastic materials. The face of the dial with the markings, letterings, graduations, and pointers shall have a matte finish.

Dial markings and pointers: Dial markings and pointers shall be free from distortion with clear and sharp edges. Width of the pointer tip shall be the same width as the dial graduations. Pointer shall not cover the graduations to which it refers but shall extend only to the nearer edge of the graduation.

Units having self-contained illumination: Dials for units having self-contained red illumination shall have dark faces with white numerals, graduations, and lettering when viewed under high level ambient illumination and shall present red numerals, graduations, and lettering when the internal illumination is energized and viewed under low level ambient illumination. In units having a single indication, the pointer shall be black with a white border. In units having two concentric indications, distinctive numerals and shapes in addition to a white border shall be used to identify each pointer.

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Units not having self-contained illumination: Dials for units not having self-contained illumination shall have white faces with black numerals, graduations, and lettering. In units having a single indication, the pointer shall be black. In units having two concentric indications, distinctive colors and numerals shall be used to identify each pointer.

Dial sizes: Size of dial markings, dial window openings, and dial windows shall be as shown in table 1.

TABLE 1. Dial sizes.

Maximum diameter dial markings	Approximate diameter of window opening	Diameter of window glass	Thickness of window glass
(inches)	(inches)	(inches)	(inches)
4	4-1/2	5	1/4
6	6-3/4	7-1/2	1/4
8	9	9-3/4	3/8

Terminal boards: Terminal boards for the connection of ship wires shall be provided when specified in the acquisition technical data package. Ship wire designations shall be shown for these terminal boards.

Wiring: Internal wiring shall be provided and connected to terminal boards. Wiring from the ship cables will be connected to these terminal boards.

Illumination: Illumination shall be provided for operational description plates and controls.

Dimmers: Two dimmers shall be provided. One shall control illumination intensity for the operational description plates, and the other the remaining items. Illumination intensity controlled by each dimmer shall be unaffected by any other dimmer setting in the system.

Red illumination: Red illumination for protecting dark adaptation shall be used when specified in the acquisition technical data package.

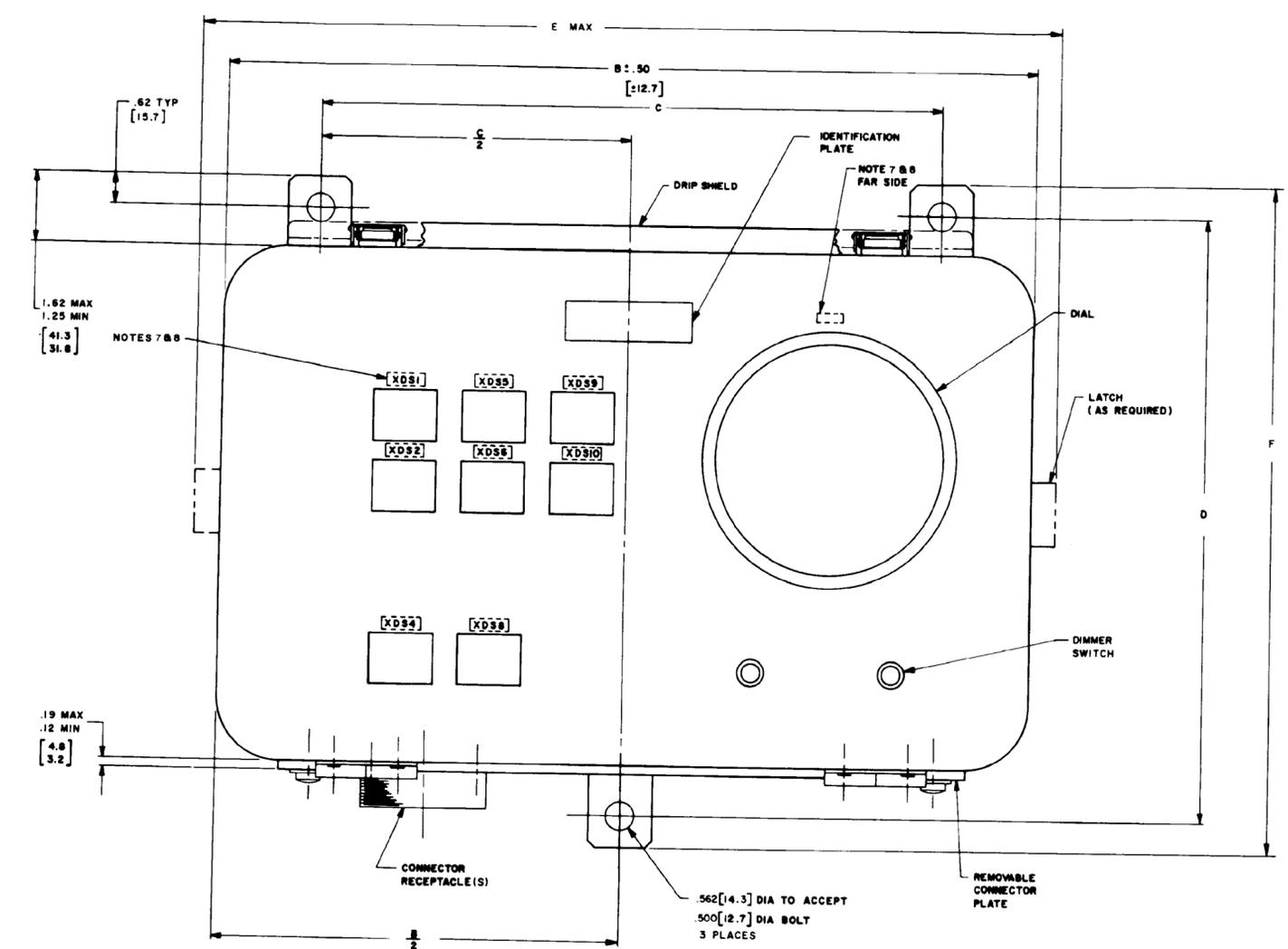
Indications: Indications shall be readable when shielded from direct sunlight.

Lamps: Lamps shall be as specified in the acquisition technical data package.

Preparing activity:  
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(Project 1290-N385)

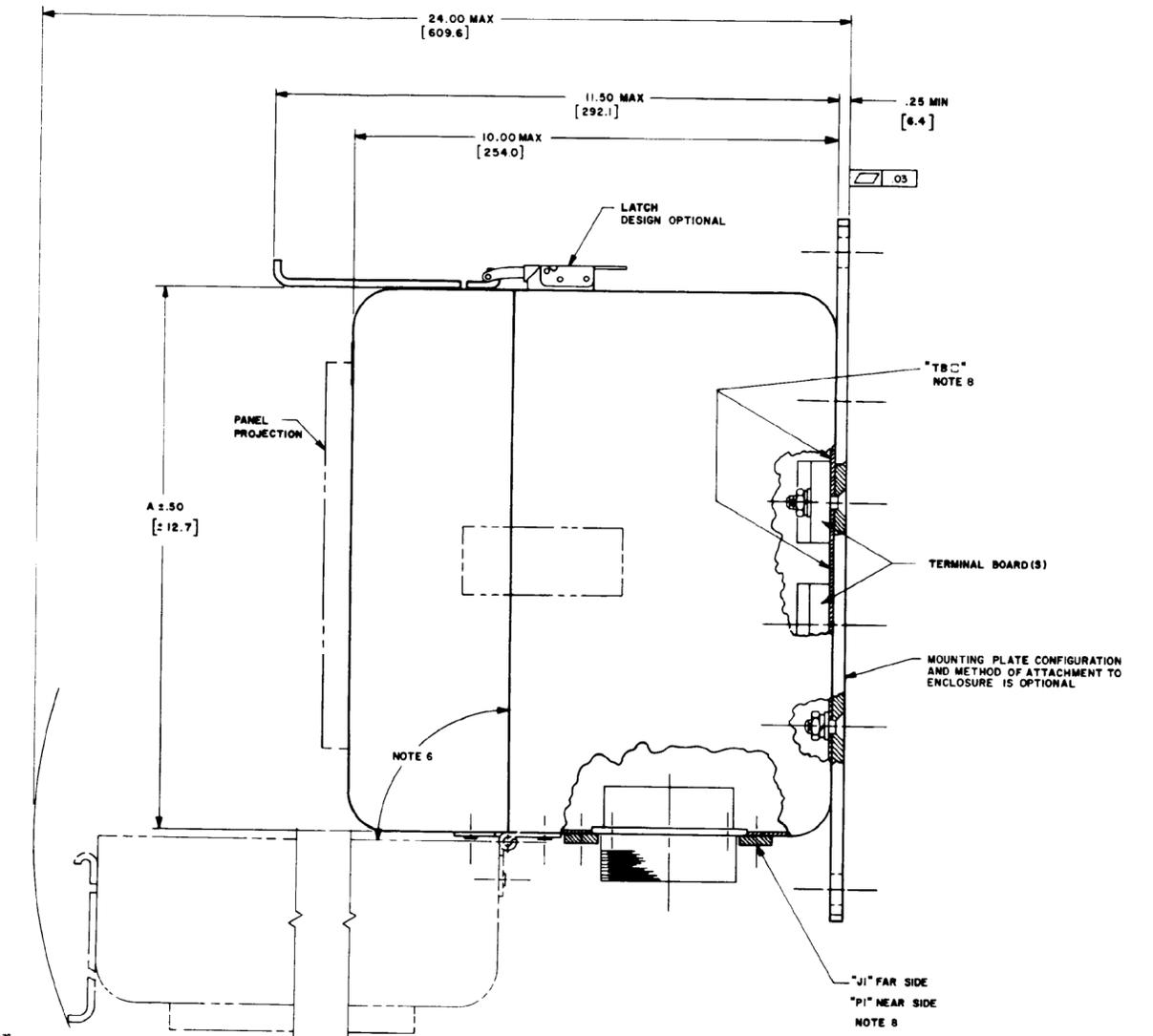


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FIGURE 1. Control indicator.



- NOTES:
1. ALL DIMENSIONS ARE IN INCHES.
  2. METRIC EQUIVALENTS ARE GIVEN FOR GENERAL INFORMATION ONLY AND ARE BASED UPON 1 INCH = 25.4mm. DIMENSIONS IN [ ] ARE MILLIMETERS.
  3. UNLESS OTHERWISE SPECIFIED, TOLERANCES ARE .XX±.03, .XXX±.010 AND ANGLES ±30°.
  4. INTERIOR AND EXTERIOR SURFACES OF ENCLOSURE SHALL BE PAINTED IN ACCORDANCE WITH MIL-S-17000.
  5. STRUCTURE SHALL BE IN ACCORDANCE WITH MIL-S-17000.
  6. DOOR IS DEPICTED IN THE 90° OPEN POSITION. MAXIMUM OPENING SHALL BE 130°±2°, CONTROLLED BY A POSITIVE STOP.
  7. PREFIX "X" SHALL PRECEDE REFERENCE DESIGNATIONS OF COMPONENTS ON FAR SIDE OF FRONT PANEL. CHARACTERS SHALL BE .12 HIGH, GOTHIC STYLE, AS INDICATED IN AREAS SHOWN.
  8. STENCIL OR RUBBER STAMP REFERENCE DESIGNATIONS REQUIRED. CHARACTERS SHALL BE .12 HIGH, GOTHIC STYLE, AS INDICATED IN AREAS SHOWN.
  9. THE GEOMETRIC CHARACTERISTIC SYMBOLS USED ON THIS FIGURE ARE DEFINED IN ANSI Y14.6.

ENCLOSURE SIZE TABULATION

PART NO.	DIM A	DIM B	DIM C	DIM D	DIM E	DIM F
-1	8.00 [203.2]	12.00 [304.8]	8.25 [209.6]	9.75 [247.7]	15.00 [381.0]	11.00 [279.4]
-2	8.00 [203.2]	16.00 [406.4]	12.25 [311.2]	9.75 [247.7]	19.00 [482.6]	11.00 [279.4]
-3	8.00 [203.2]	20.00 [508.0]	16.25 [412.8]	9.75 [247.7]	23.00 [584.2]	11.00 [279.4]
-4	10.00 [254.0]	12.00 [304.8]	8.25 [209.6]	11.75 [298.5]	15.00 [381.0]	13.00 [330.2]
-5	10.00 [254.0]	16.00 [406.4]	12.25 [311.2]	11.75 [298.5]	19.00 [482.6]	13.00 [330.2]
-6	10.00 [254.0]	20.00 [508.0]	16.25 [412.8]	11.75 [298.5]	23.00 [584.2]	13.00 [330.2]
-7	10.00 [254.0]	24.00 [609.6]	20.25 [514.4]	11.75 [298.5]	27.00 [685.8]	13.00 [330.2]
-8	12.00 [304.8]	12.00 [304.8]	8.25 [209.6]	13.75 [349.3]	15.00 [381.0]	15.00 [381.0]
-9	12.00 [304.8]	16.00 [406.4]	14.25 [362.0]	13.75 [349.3]	21.00 [533.4]	15.00 [381.0]
-10	12.00 [304.8]	24.00 [609.6]	20.25 [514.4]	13.75 [349.3]	27.00 [685.8]	15.00 [381.0]