

MIL-S-20708/68C(NAVY)  
2 March 1988

SUPERSEDING  
MIL-S-20708/68B(OS)  
3 March 1969

MILITARY SPECIFICATION SHEET

SYNCHRO, TORQUE DIFFERENTIAL TRANSMITTER, TYPE 31TDX6C

This specification is approved for use within the Department of the Navy and is available for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the Synchro described herein shall consist of this specification and the latest issue of MIL-S-20708.

TABLE I. Requirements.

Requirement	Value	Unit	Tolerance
Frequency	60	Hz	nominal
Primary Voltage	90	volts	nominal
Primary Current	725	milliamps	maximum
Primary Power	7.7	watts	maximum
Impedance:			
Zrs	44	ohms	maximum
Impedance Angle:			
Zrs	27	degrees	minimum
DC Resistance (Line to Line):			
Rotor	24	ohms	reference
Stator	19	ohms	reference
Transformation Ratio	1.154	-----	+2%
Phase Shift	6.5(lead)	degrees	maximum
Electrical Error	10	minutes	maximum
Friction Torque	0.5	ounce-inches	maximum
Torque Gradient	0.3	ounce-inches per degree	minimum
Temperature Rise	18	degrees (C)	maximum
Weight	126	ounces	nominal
Radial Play	0.0008	inches	maximum
End Play	0.0030	inches	+ 0.0020 -

This unit shall not be subjected to the altitude requirements of MIL-S-20708.

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TABLE II. Military part number variant characteristics.

Military Part No. <u>1/</u>	A + .010	B + .010	G Maximum	Shaft Style	Terminal End	U + .0000
M20708/68-01C	.700	.730	3.635	Splined	Terminal Board	.2405

1/ Military part number M20708/68-01C shall be the NATO standard.

Note: The suffix letter following the numerical dash number corresponds to the latest modification letter in the type designation.

TABLE III. Military part number cross-references.

SUPERSEDED MILITARY PART NUMBER	NEW MILITARY PART NUMBER
M20708/68B-001	M20708/68-01C

NOTE: All line items shown in Table III refer to equivalent and interchangeable synchros of the same type designation modification. Part number changes do not affect form, fit, or function of the synchros listed therein.

Custodians:  
Navy - OS

Preparing Activity:  
Navy - OS  
(Project No. 5990-N346)

Review Activities:  
Navy - SH, AS

User Activities:  
Navy - MC, CG