TMC SPECIFICATION

NO. S 863

REV: 0A

COMPILED: FRD | CHECKED: | APPD:

SHEET 1 OF 3

TITLE:

FUSES, MARKINGS AND RATINGS FOR

NOTE: THIS SPECIFICATION IS MANDATORY ON ALL NEW EQUIPMENT DESIGNED BY TMC AFTER 1 OCTOBER 1964.

1. Fuse ratings shall not be engraved on front panels. However, the function of all fuses located on front panels shall be identified, such as B+, AC, OVENS, etc.

2. The symbol designation (e.g., F101) and rating may appear internally or on the rear of the unit. However, in all cases, a fuse rating chart (see Paragraph 3) shall be placed conspicuously in the rear of all TMC equipment racks.

3. Instruction manuals shall include a table of operating temperature, line voltage, and line frequency versus required fuse rating (see Chart II for conversion factors).

4. Fast acting fuses should be used on the load side of all D.C. power supplies. The fuse should be rated at approximately 150% of the maximum normal load current. Where different loads may be used with the same supply (e.g., the HFP power supply), the instruction manual shall include a chart showing the proper fuse rating versus load. For blowing times, see Chart I. Fast blow fuses are <u>not</u> temperature sensitive.

5. Slow blow fuses should be used wherever short duration current surges are expected <u>and can be tolerated</u>, such as with motors or filament transformers. For temperature, line voltage, and line frequency conversion factors, see Chart II.

6. In the event of conflict between a contract and this specification, the contract shall take precedence. In particular, said conflict applies to the USAF and the FAA.

<u>CHART I</u>

CURRENT	BLOW TIME	
	SLOW BLOW	FAST BLOW
110%	Life	Life
135%	0.2-1 hr.	0-1 hr.
200%	10-30 sec.	0-5 sec.
500%	0-3 sec.	0 sec.

CHART II

FREQ.	50 cps△		60 cps	
VOLT.∓	115	230	115	230
TEMP.				
25C	1.06	0.53	1.00	0.50
*40C	1.11	0.56	1.05	0.53
*60C	1.22	0.61	1.15	0.58
*80C	1.38	0.69	1.30	0.65

*Slow blow fuses only

∓ Any voltage in the ratio of 2:1.

△ See paragraph 8.

7. With reference to chartII: If equipment was originally designed for 230V,60cps,40° C,and the fuse rating is desired for operation at 115V,50cps,60° C,multiply the original fuse rating by the conversion factor of the new conditions and divide by the conversion factor of the old conditions. Eg:multiply by 1.22/0.53 or 2.30. As per the national electrical code if the required fuse rating is non standard (ref:FU102) the next larger size fuse shall be used, provided the wire size can carry the load.Eg: if a 6.15 amp fuse is required use a 6.25 amp fuse which is standard.

8. At 50 cps,where an AC motor forms the major part of the load,chart II does not apply. Proper fuse rating should be measured at 50 cps or obtained from the manufacturer of the motor.

9. Unless otherwise specified,or where paragraph 8 applies,equipment built and shipped by TMC shall be fused for 115V,50cps,25° C ambient and the chart specified in paragraph 3 shall indicate voltage and ambient temperature only.

REVISION SHEET

THE TECHNICAL MATERIEL CORP.
MAMARONECK NEW YORK

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LIST NO.

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9/24/64		1 of 3		0= ORIGINAL RELEASE FOR PRODUCTION.	
12/16/64	A	3	13143	Revised sht. 3 per EMN	46