



## GENERATOR SERVICE PROCEDURE

### RECOMMENDED RESISTANCE TEMPERATURE DETECTOR (RTD) SETTINGS

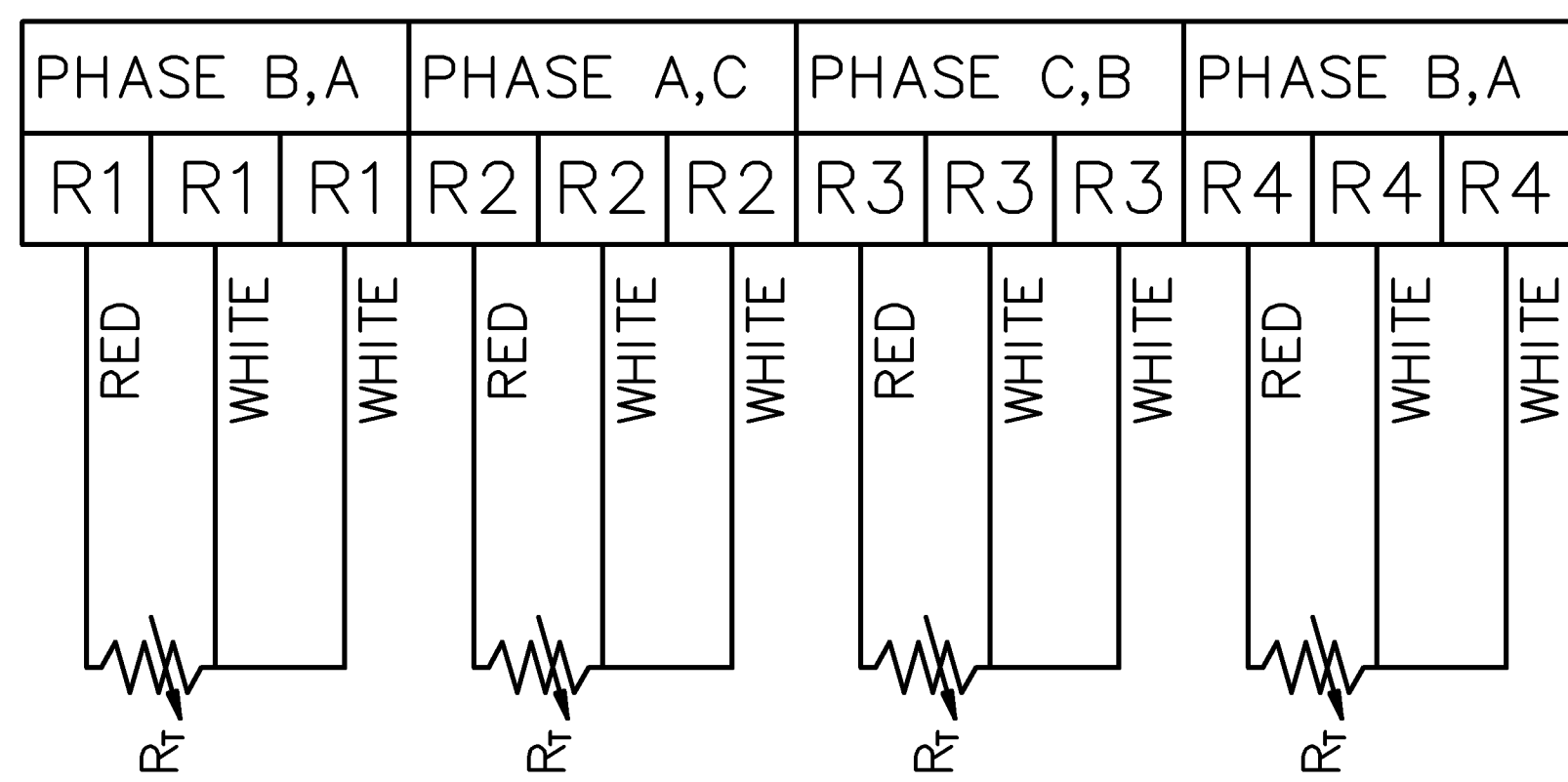
Recommended Stator RTD Settings For Continuous Duty Generators						
Generator Ratings	Temperature Class	NEMA Rise Limit by RTD	NEMA Limit Total Temperature	Maximum Allowable	Alarm Temperature Setting	Trip Temperature Setting
1563Kva and Less	A	70	110	110	120	130
	B	90	130	130	140	150
	F	115	155	155	165	175
	H	140	180	180	190	200
Over 1563Kva and 7000v & Less	A	65	105	105	115	125
	B	85	125	125	135	145
	F	110	150	150	160	170
	H	135	175	175	185	195
Over 1563Kva and over 7000v	A	60	100	100	105	115
	B	80	120	120	125	135
	F	105	145	145	150	160
	H	125	165	NA	NA	NA

Recommended Stator RTD Settings For Standby Duty Generators						
Generator Ratings	Temperature Class	NEMA Rise Limit by RTD	NEMA Limit Total Temperature	Maximum Allowable	Alarm Temperature Setting	Trip Temperature Setting
1563Kva and Less	A	95	135	135	145	155
	B	115	155	155	165	175
	F	140	180	180	190	200
	H	165	205	205	215	225
Over 1563Kva and 7000v & Less	A	90	130	130	140	150
	B	110	150	150	160	170
	F	135	175	175	185	195
	H	160	200	200	210	220
Over 1563Kva and over 7000v	A	85	125	125	130	140
	B	105	145	145	150	160
	F	130	170	170	175	185
	H	150	190	NA	NA	NA

Recommended Bearing RTD Settings For All Duty Generators			
Location of temperature Measuememt	Maximum Allowable	Alarm Temperature Setting	Trip Temperature Setting
As measured on the Bearing	100	110	120
As Measured on the Bearing Housing	90	100	110

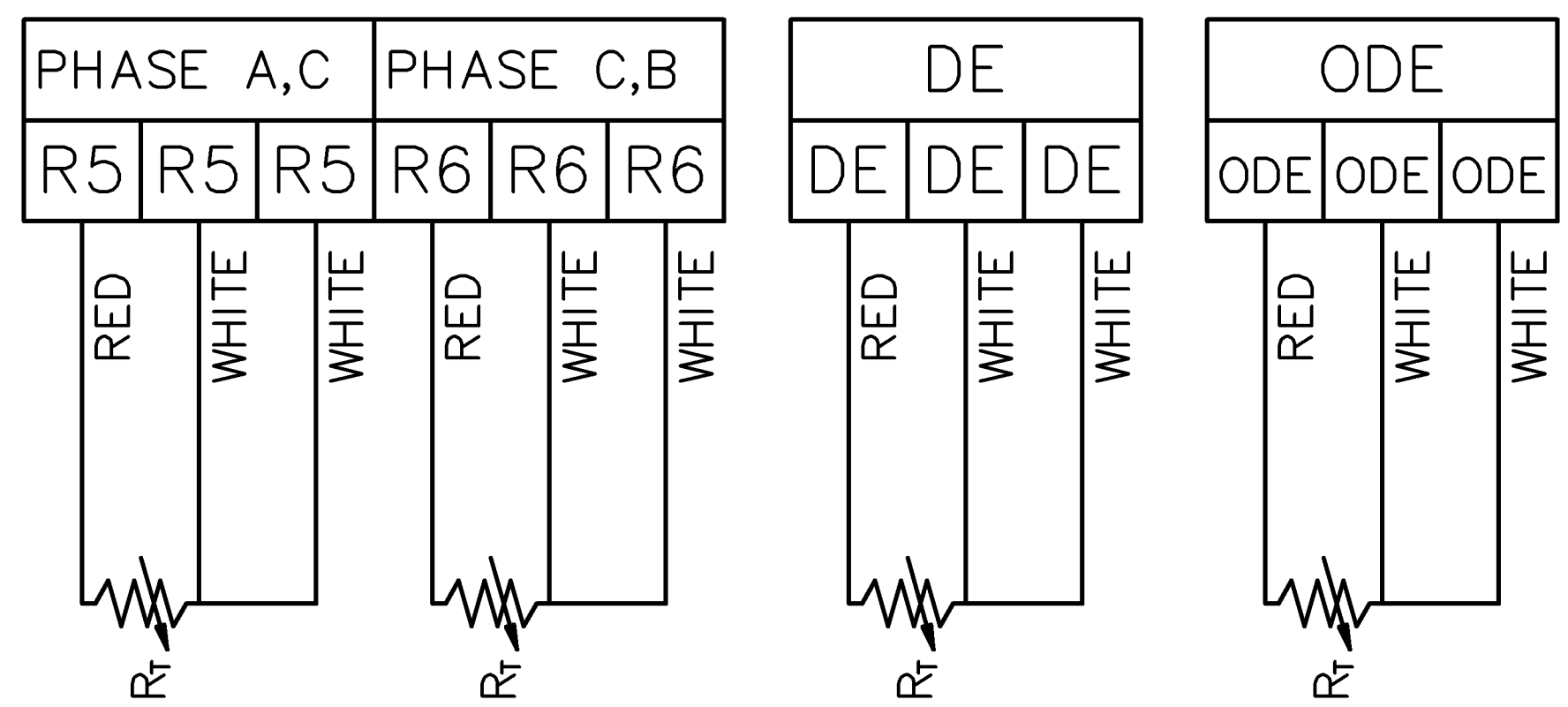
Stator RTD limit settings are based on NEMA MG1- 2003, Part 32, "Synchronous Generators temperature limits per Table 32-3 with a + 10° C allowance for alarm, and a + 20° C allowance for trip for low and medium voltage machines. For high voltage machines limits are +5° C allowance for alarm and +15° C allowance for trip. Marathon's Generator Engineering Department feels that these settings are sufficiently low enough for protection of the generator, yet high enough to avoid nuisance trips.

← (TERMINAL BLOCK 1) →



TEMPERATURE  
DETECTOR  
CIRCUIT  
(RTD)

← (TERMINAL BLOCK 2) →




TEMPERATURE  
DETECTOR  
CIRCUIT  
(RTD)

TEMPERATURE  
DETECTOR  
CIRCUIT  
(BEARING RTD)  
(SEE NOTE 1)

TEMPERATURE  
DETECTOR  
CIRCUIT  
(BEARING RTD)  
(SEE NOTE 1)

NOTE:  
1- APPLIES TO GENERATORS EQUIPPED WITH DE & ODE (TERMINATED) BEARING RTD'S.

				TOLERANCES UNLESS SPECIFIED			DRAWN DRS 08-18-1998					
				DEC.	INCHES		CHK	TM 08-18-1998				
				.X	± -		APPD	LM 08-18-1998				
3	REVISED THE PHASE DESIGNATIONS	CN 38333	TM 08-17-2004	.XX	± -	TITLE CONNECTION DIAGRAM MAGNAMAX GENERATOR	SCALE	3=4				
2	ADDED NOTE 1	CN 32553	DRS 02-02-2004	ML .XXX	± -		REF	505171-1166				
1	NEW DRAWING	CN 26717	DRS 08-18-1998	.XXXX	± -	MAT'L.	FMF					
NO.	REVISION	BY & DATE	CHK	ANG	± -	FINISH	PREV					
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