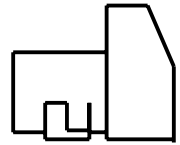


# MARATHON ELECTRIC

## GENERATORS

### TYPICAL SUBMITTAL DATA



MODEL : 360MSL0085

BASE MODEL: 360MSL0085

Winding WC- 85

Submittal Data: 415 Volts\*, 40 kW, 50 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase

10/31/2001

|                     |                       |                   |                             |                               |                      |                     |                               |                      |                     |
|---------------------|-----------------------|-------------------|-----------------------------|-------------------------------|----------------------|---------------------|-------------------------------|----------------------|---------------------|
| Kilowatt ratings at | 1800 RPM              | 60 Hertz          | 12 LEADS                    | Standard 3 phase              |                      |                     |                               |                      |                     |
| kW (kVA)            | 3 Phase               | 0.8 Power Factor  | Dripproof or Open Enclosure |                               |                      |                     |                               |                      |                     |
|                     | Class B               | Class F           |                             |                               | Class H              |                     |                               |                      |                     |
| Voltage*            | 80° C ⊕<br>Continuous | 90° C ⊕<br>Lloyds | 95° C ⊕<br>ABS              | 105° C<br>British<br>Standard | 105° C<br>Continuous | 130° C ⊕<br>Standby | 125° C<br>British<br>Standard | 125° C<br>Continuous | 150° C ⊕<br>Standby |
| 415                 | 40 (50)               | 40 (50)           | 40 (50)                     | 40 (50)                       | 40 (50)              | 40 (50)             | 40 (50)                       | 40 (50)              |                     |

⊕ Rise by resistance method, Mil-Std-705, Method 680.1b.

British Standard Rating per BS 5000

| Submittal Data: 415 Volts*, 40 kw, 50 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase |   |               | STD. CONNECTION |   |                                   |
|---|---|---------------|-----------------|---|-----------------------------------|
| Mil-Std-705B  |   |               | Mil-Std-705B    |   |                                   |
| Method  | Description   | Value         | Method          | Description   | Value                             |
| 301.1b  | Insulation Resistance                                       | >1.5 Meg      | 505.3b          | Overspeed   | 2250 RPM                          |
| 302.1a  | High Potential Test   |               | 507.1c          | Phase Sequence CCW-ODE                              | ABC                               |
|   | Main Stator   | 2000 Volts    | 508.1c          | Voltage Balance, L-L or L-N                         | 0.20%                             |
|   | Main Rotor  | 1500 Volts    | 601.4a          | L-L Harmonic Maximum - Total<br>(Distortion Factor) | @NA                               |
|   | Exciter Stator  | 1500 Volts    | 601.4a          | L-L Harmonic Maximum - Single                       | @NA                               |
|   | Exciter Rotor   | 1500 Volts    | 601.1c          | Deviation Factor                                    | @NA                               |
|   | PMG Stator  | NS**          | ---             | TIF (1960 Weightings)                               | < @NA                             |
| 401.1a  | Stator Resistance, Line to Line<br>High Wye Connection      | 0.1118 Ohms   | ---             | THF (IEC, BS & NEMA Weightings)                     | @NA                               |
|   | Rotor Resistance  | 1.13 Ohms     | 652.1a          | Shaft Current                                       | < 0.1 ma                          |
|   | Exciter Stator  |               | ---             | Main Stator Capacitance to ground                   | @NA mfd                           |
|   | Exciter Rotor   | 0.23 Ohms     |                 |   |                                   |
|   | PMG Stator  | NS**          |                 |   |                                   |
| 410.1a  | No Load Exciter Field Amps<br>at 208/415 Volts Line to Line |               |                 |   |                                   |
| 420.1a  | Short Circuit Ratio   | 0.813         |                 |   |                                   |
| 421.1a  | Xd Synchronous Reactance                                    | 1.6 p.u.      |                 |   |                                   |
|   |   | 5.477 ohms    | --              | Generator Frame                                     | 360                               |
| 422.1a  | X2 Negative Sequence React.                                 | 0.086 pu      | --              | Type  | LIMA MAC                          |
|   |   | 0.294 ohms    | --              | Insulation  | Class F                           |
| 423.1a  | X0 Zero Sequence Reactance                                  | 0.008 pu      | --              | Coupling - Single Bearing                           | Flexible                          |
|   |   | 0.027 ohms    | --              | Amortisseur Windings                                | Full                              |
| 425.1a  | X'd Transient Reactance                                     | 0.122 pu      | --              | Excitation  | Ext. Voltage Regulated, Brushless |
|   |   | 0.418 ohms    | --              | Voltage Regulator                                   | NONE                              |
| 426.1a  | X"d Subtransient Reactance                                  | 0.081 pu      | --              | Voltage Regulation                                  | 4.00%                             |
|   |   | 0.277 ohms    |                 |   |                                   |
| --  | Xq Quadrature Synch. React.                                 | Not Available | --              | Cooling Air Volume                                  | 1020 CFM                          |
| 427.1a  | T'd Transient Short Circuit<br>Time Constant                | 0.08 sec.     | --              | Heat rejection rate                                 | 216 Btu's/min                     |
| 428.1a  | T"d Subtransient Short Circuit<br>Time Constant             | 0.035 sec.    | --              | Full load current                                   | 70 amps                           |
| 430.1a  | T'do Transient Open Circuit<br>Time Constant                | 1.09 sec.     | --              | Minimum Input hp required                           | 58.7                              |
| 432.1a  | Ta Short Circuit Time<br>Constant of Armature Winding       | 0.005 sec.    | --              | Efficiency at rated load :                          | 91.3%                             |
|   |   |               | --              | Full load torque                                    | 171 Lb-ft                         |

(3) Excitation support system or PMG required to sustain short circuit currents.

\* Voltages refer to wye (star) connection, unless otherwise specified.

\*\* Not supplied as standard equipment.

# MARATHON ELECTRIC GENERATORS

## TYPICAL DYNAMIC CHARACTERISTICS



MODEL : 360MSL0085

BASE MODEL: 360MSL0085

Winding WC- 85

Submittal Data: 415 Volts\*, 40 kW, 50 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase

