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|-------------------------|---|---------|--------------------------|
| CONTROL SYSTEM | SELF EXCITED | | |
| A.V.R. | SX460 | | AS440 |
| VOLTAGE REGULATION | ± 1.0 % | ± 1.0 % | With 4% ENGINE GOVERNING |
| SUSTAINED SHORT CIRCUIT | SERIES 4 CONTROL DOES NOT SUSTAIN A SHORT CIRCUIT CURRENT | | |

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| INSULATION SYSTEM | CLASS H |
| PROTECTION | IP22 |
| RATED POWER FACTOR | 0.8 |
| STATOR WINDING | DOUBLE LAYER CONCENTRIC |
| WINDING PITCH | TWO THIRDS |
| WINDING LEADS | 12 |
| STATOR WDG. RESISTANCE | 0.059 Ohms PER PHASE AT 22°C SERIES STAR CONNECTED |
| ROTOR WDG. RESISTANCE | 1.12 Ohms at 22°C |
| EXCITER STATOR RESISTANCE | 20 Ohms at 22°C |
| EXCITER ROTOR RESISTANCE | 0.091 Ohms PER PHASE AT 22°C |
| R.F.I. SUPPRESSION | BS EN 61000-6-2 & BS EN 61000-6-4,VDE 0875G, VDE 0875N. refer to factory for others |
| WAVEFORM DISTORTION | NO LOAD < 1.5% NON-DISTORTING BALANCED LINEAR LOAD < 5.0% |
| MAXIMUM OVERSPEED | 2250 Rev/Min |
| BEARING DRIVE END | BALL. 6315-2RS (ISO) |
| BEARING NON-DRIVE END | BALL. 6310-2RS (ISO) |

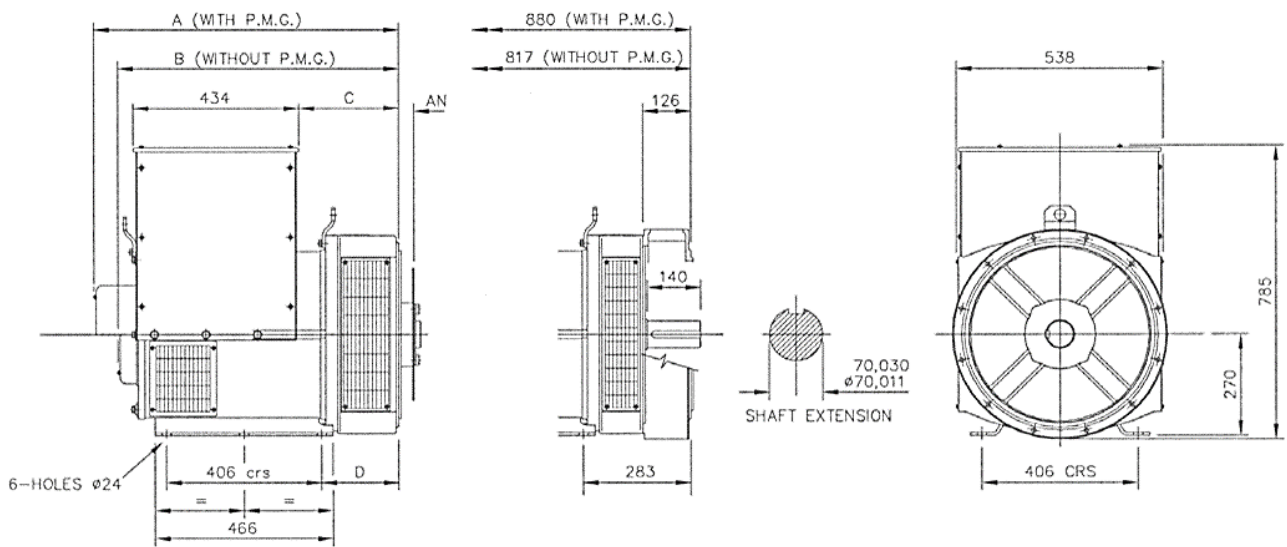
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|-----------------------------|-------------------------|-------------------------|
| | 1 BEARING | 2 BEARING |
| WEIGHT COMP. GENERATOR | 406 kg | 420 kg |
| WEIGHT WOUND STATOR | 131 kg | 131 kg |
| WEIGHT WOUND ROTOR | 133.78 kg | 122.82 kg |
| WR ² INERTIA | 1.0288 kgm ² | 0.9781 kgm ² |
| SHIPPING WEIGHTS in a crate | 439 kg | 452 kg |
| PACKING CRATE SIZE | 96 x 61 x 92(cm) | 96 x 61 x 92(cm) |

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|--|------------------------------------|---------|---------|---------|------------------------------------|---------|---------|---------|
| | 50 Hz | | | | 60 Hz | | | |
| TELEPHONE INTERFERENCE | THF<2% | | | | TIF<50 | | | |
| COOLING AIR | 0.514 m ³ /sec 1090 cfm | | | | 0.617 m ³ /sec 1308 cfm | | | |
| VOLTAGE SERIES STAR | 380/220 | 400/231 | 415/240 | 440/254 | 416/240 | 440/254 | 460/266 | 480/277 |
| VOLTAGE PARALLEL STAR | 190/110 | 200/115 | 208/120 | 220/127 | 208/120 | 220/127 | 230/133 | 240/138 |
| VOLTAGE SERIES DELTA | 220/110 | 230/115 | 240/120 | 254/127 | 240/120 | 254/127 | 266/133 | 277/138 |
| KVA BASE RATING FOR REACTANCE VALUES | 100 | 100 | 100 | N/A | 112.5 | 117.5 | 117.5 | 125 |
| X _d DIR. AXIS SYNCHRONOUS | 2.45 | 2.21 | 2.05 | - | 2.76 | 2.58 | 2.36 | 2.30 |
| X' _d DIR. AXIS TRANSIENT | 0.20 | 0.18 | 0.17 | - | 0.24 | 0.22 | 0.21 | 0.20 |
| X'' _d DIR. AXIS SUBTRANSIENT | 0.14 | 0.13 | 0.12 | - | 0.16 | 0.15 | 0.14 | 0.13 |
| X _q QUAD. AXIS REACTANCE | 1.59 | 1.43 | 1.33 | - | 1.58 | 1.48 | 1.35 | 1.32 |
| X'' _q QUAD. AXIS SUBTRANSIENT | 0.18 | 0.16 | 0.15 | - | 0.23 | 0.21 | 0.20 | 0.19 |
| X _L LEAKAGE REACTANCE | 0.07 | 0.06 | 0.06 | - | 0.08 | 0.07 | 0.07 | 0.07 |
| X ₂ NEGATIVE SEQUENCE | 0.16 | 0.14 | 0.13 | - | 0.19 | 0.18 | 0.16 | 0.16 |
| X ₀ ZERO SEQUENCE | 0.10 | 0.09 | 0.08 | - | 0.12 | 0.11 | 0.10 | 0.10 |

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| REACTANCES ARE SATURATED | VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED |
| T' _d TRANSIENT TIME CONST. | 0.028 s |
| T'' _d SUB-TRANSTIME CONST. | 0.001 s |
| T' _{do} O.C. FIELD TIME CONST. | 0.8 s |
| T _a ARMATURE TIME CONST. | 0.007 s |
| SHORT CIRCUIT RATIO | 1/X _d |

RATINGS

| Class - Temp Rise | | Cont. F - 105/40°C | | | | Cont. H - 125/40°C | | | | Standby - 150/40°C | | | | Standby - 163/27°C | | | |
|-------------------|-------------------|--------------------|------|------|-----|--------------------|------|------|-----|--------------------|------|------|-----|--------------------|-------|-------|-----|
| 50 Hz | Series Star (V) | 380 | 400 | 415 | 440 | 380 | 400 | 415 | 440 | 380 | 400 | 415 | 440 | 380 | 400 | 415 | 440 |
| | Parallel Star (V) | 190 | 200 | 208 | 220 | 190 | 200 | 208 | 220 | 190 | 200 | 208 | 220 | 190 | 200 | 208 | 220 |
| | Series Delta (V) | 220 | 230 | 240 | 254 | 220 | 230 | 240 | 254 | 220 | 230 | 240 | 254 | 220 | 230 | 240 | 254 |
| | kVA | 104 | 104 | 104 | N/A | 120 | 120 | 120 | N/A | 125 | 125 | 125 | N/A | 130 | 130 | 130 | N/A |
| | kW | 83.2 | 83.2 | 83.2 | N/A | 96.0 | 96.0 | 96.0 | N/A | 100 | 100 | 100 | N/A | 104 | 104 | 104 | N/A |
| | Efficiency (%) | 90.7 | 91.1 | 91.3 | N/A | 89.8 | 90.3 | 90.6 | N/A | 89.5 | 90.0 | 90.4 | N/A | 89.2 | 89.8 | 90.2 | N/A |
| | kW Input | 88.1 | 88.1 | 88.1 | N/A | 101 | 101 | 101 | N/A | 125 | 125 | 125 | N/A | 110.1 | 110.1 | 110.1 | N/A |



| DIMENSIONS | | |
|-------------|------------|-------------|
| Length (mm) | Width (mm) | Height (mm) |
| 878 | 538 | 785 |