

TECHNICAL DATA SHEET



ALTERNATOR E1C10S E

Single-Phase brushless synchronous alternator with capacitor - 2 poles

E1C10S E

COMMON DATA

| | | | |
|----------------------|---------------------|--|-------------|
| Rated Power at 50Hz | kVA | 3,5 | |
| Rated Power at 60Hz | kVA | 4,3 | |
| Rated Power Factor | | 1 | |
| Nominal Temperature | °C | 40 | |
| Control System | | self-excited | |
| Execution | | brushless | |
| Regulation Type | | capacitor | |
| Insulation Class | | H | |
| Protection | | IP21 | |
| Maximum Over speed | rpm | 4500 | |
| Overload | | 110% of rated power for one hour in a cycle of 6 hours | |
| Air Flow Requirement | m ³ /min | 3,75 at 50Hz | 4,7 at 60Hz |
| R.F.I. Suppression | | Standard EN55011 | |

REGULATION DATA

| | | | |
|-------------------------|----|-------------------------|--|
| Capacitor | | Capacitor | |
| Capacitor | μF | 20 | |
| Voltage Regulation | | ±5% | |
| Sustained Short Circuit | | > 250% of rated current | |

WINDING DATA

| | | | |
|---------------------------|---|-------------------------------------|--|
| Stator Winding | | Single layer with auxiliary winding | |
| Rotor Winding | | with damping cage | |
| Number of Leads of Stator | | 4 | |
| Stator Winding Resistance | Ω | 1,6 at 20°C | |
| Rotor Winding Resistance | Ω | 3,48 at 20°C | |
| THD at full load | | <6% | |
| THD at no load | | <5% | |

STANDARD

| | |
|------------|-----------------------------|
| References | EN60034-1 ISO8528-3 EN55011 |
|------------|-----------------------------|

ON REQUEST

UL 1446, Systems of Insulating Materials - General CSA-C22.2 No. 0, Appendix B, General Requirements - Canadian Electrical Code, Part I

CAN/CSA - C22.2 No. 100-14 (R2009) Motors and Generators, UL1004-1 2nd ed. Rotating Electrical Machines - General Requirements, UL1004-4 2nd ed. Electric Generators

E1C10S E

ELECTRICAL DATA

| Frequency | | 50Hz - 3000rpm | 60Hz - 3600rpm |
|--|----|----------------|----------------|
| Voltage Series Star | V | 115/230 | 110/220 |
| Rated Power in Class H (125°C/40°C) | kW | 3,5 | 4,3 |
| Rated Power in Class F (105°C/40°C) | kW | 3,2 | 3,9 |

EFFICIENCY IN CL. H

| | | |
|-----|-------|-------|
| 4/4 | 75,0% | 76,0% |
| 3/4 | 75,5% | 76,5% |

MECHANICAL DATA

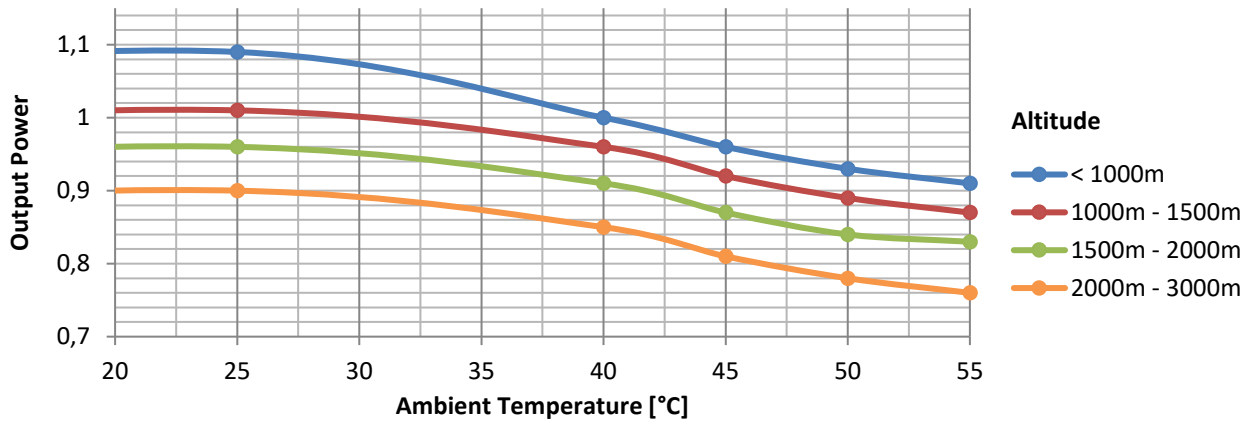
| | | |
|---------------------------------|-----------|------------|
| Bearing non drive end | | 6204-2Z-C3 |
| Bearing drive end (B3/B14 form) | | 6305-2Z-C3 |
| Weight of generator | in B2 | kg |
| | in B3/B14 | kg |
| | in B3/B9 | kg |

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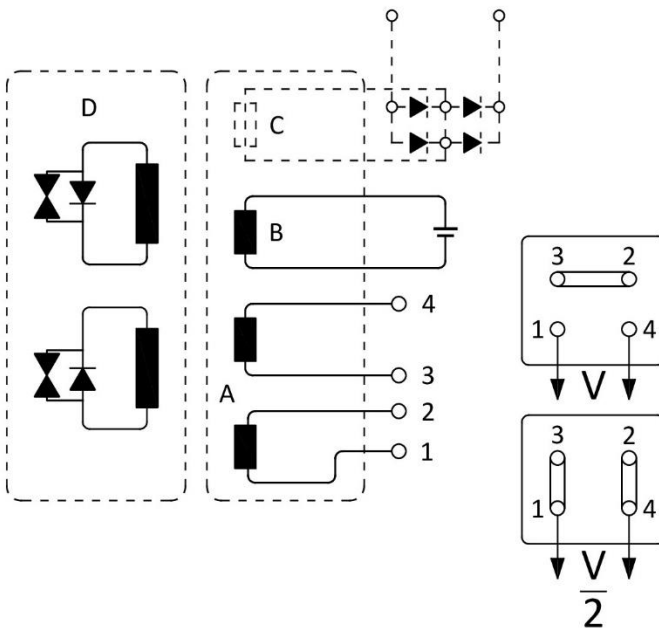
MOMENT OF INERZIA

| | | |
|--------|-------------------|--------|
| B3/B9 | kg·m ² | 0,0115 |
| B3/B14 | kg·m ² | 0,0115 |

DERATING CURVES



WIRING DIAGRAM

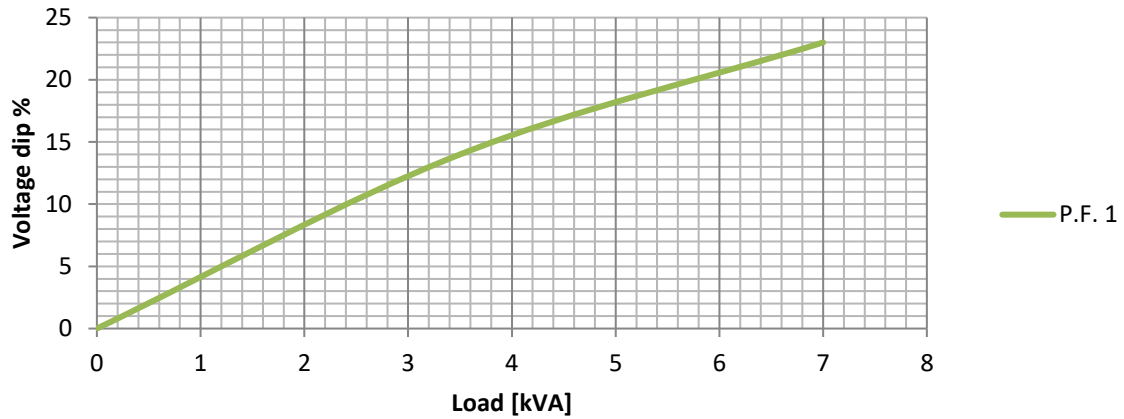


- A Main Winding
- B Excitation Winding
- C Battery Charger Circuit
- D Polar wheel

E1C10S E

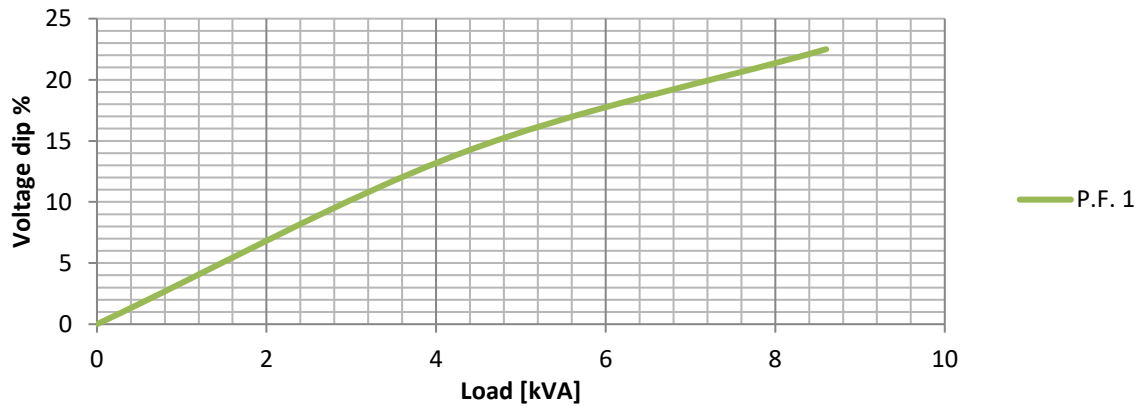
TRANSIENT VOLTAGE VARIATION 50Hz

Transient Voltage Variation @ 50Hz

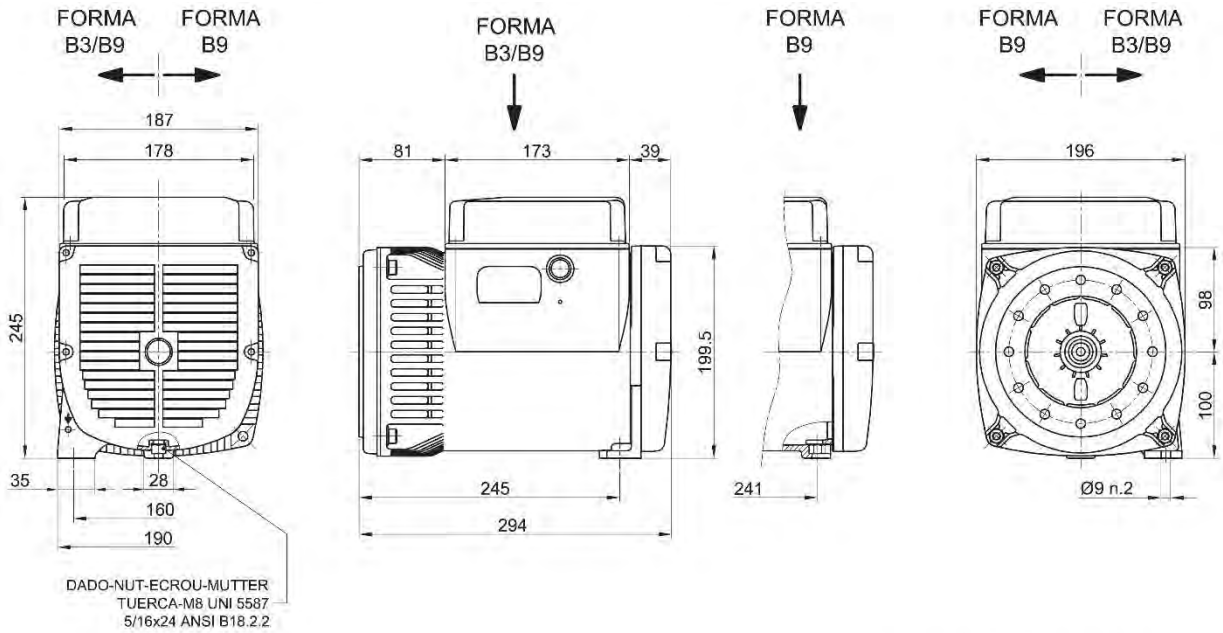


TRANSIENT VOLTAGE VARIATION 60Hz

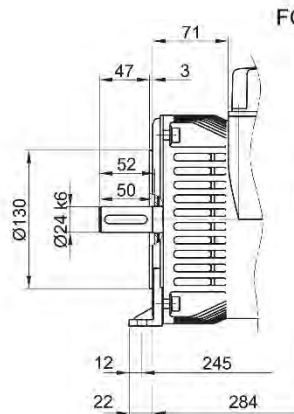
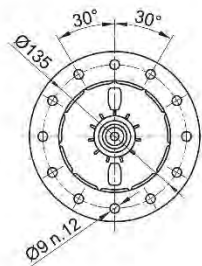
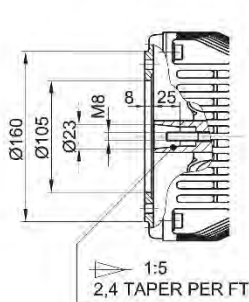
Transient Voltage Variation @ 60Hz



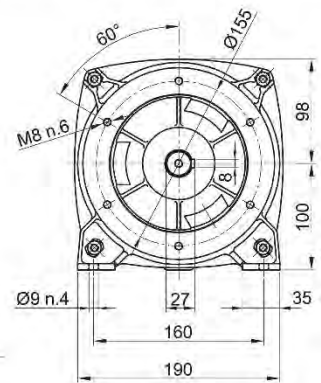
E1C10S E



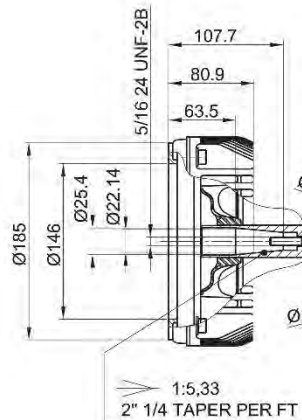
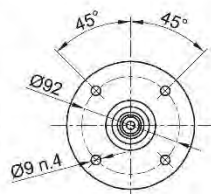
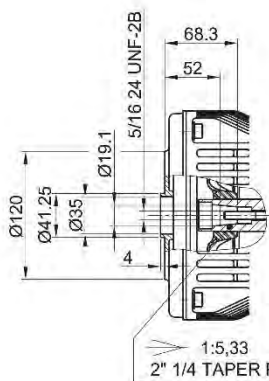
FORMA FORME B9 C.23



FORMA FORME B14



FORMA FORME J609a



FORMA FORME J609b

