

TECHNICAL DATA SHEET



**ALTERNATOR E1C13S B/4**

*Single-Phase brushless synchronous alternator with capacitor - 4 poles*

## E1C13S B/4

### COMMON DATA

|                      |                     |  |             |
|----------------------|---------------------|--|-------------|
| Rated Power at 50Hz  | kVA                 | 7,0  |             |
| Rated Power at 60Hz  | kVA                 | 8,5  |             |
| Rated Power Factor   |                     | 1,0  |             |
| Nominal Temperature  | °C                  | 40   |             |
| Control System       |                     | self-excited   |             |
| Execution            |                     | brushless  |             |
| Regulation Type      |                     | Capacitor  |             |
| Insulation Class     |                     | H  |             |
| Protection           |                     | IP21   |             |
| Maximum Over speed   | rpm                 | 2250   |             |
| Overload             |                     | 110% of rated power for one hour in a cycle of 6 hours |             |
| Air Flow Requirement | m <sup>3</sup> /min | 5,3 at 50Hz  | 6,4 at 60Hz |
| R.F.I. Suppression   |                     | Standard EN55011                                       |             |

### REGULATION DATA

|                         |                                    |  |  |
|-------------------------|------------------------------------|--|--|
| Capacitor               | Capacitor with Aluminum Technology |  |  |
| 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                                   | 0,57 at 20°C |  |
| Rotor Winding Resistance  | Ω                                   | 0,94 at 20°C |  |
| THD at full load          | <5,5%                               |              |  |
| THD at no load            | <5,0%                               |              |  |

### 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

## E1C13S B/4

### ELECTRICAL DATA

| Frequency                              |    | 50Hz - 1500rpm | 60Hz - 1800rpm |
|--|----|----------------|----------------|
| Voltage Series Star                    | V  | <b>115/230</b> | <b>110/220</b> |
| Rated Power in Class H<br>(125°C/40°C) | kW | 7,0            | 8,5            |
| Rated Power in Class F<br>(105°C/40°C) | kW | 6,2            | 7,5            |
| Rated Power Standby<br>(150°C/40°C)    | kW | 7,7            | 9,3            |
| Rated Power Standby<br>(163°C/27°C)    | kW | 8,0            | 9,6            |

### EFFICIENCY IN CL. H

|     |       |       |
|-----|-------|-------|
| 4/4 | 78,0% | 79,0% |
| 3/4 | 79,0% | 80,0% |
| 2/4 | 74,3% | 75,1% |
| 1/4 | 66,2% | 68,0% |

### MECHANICAL DATA

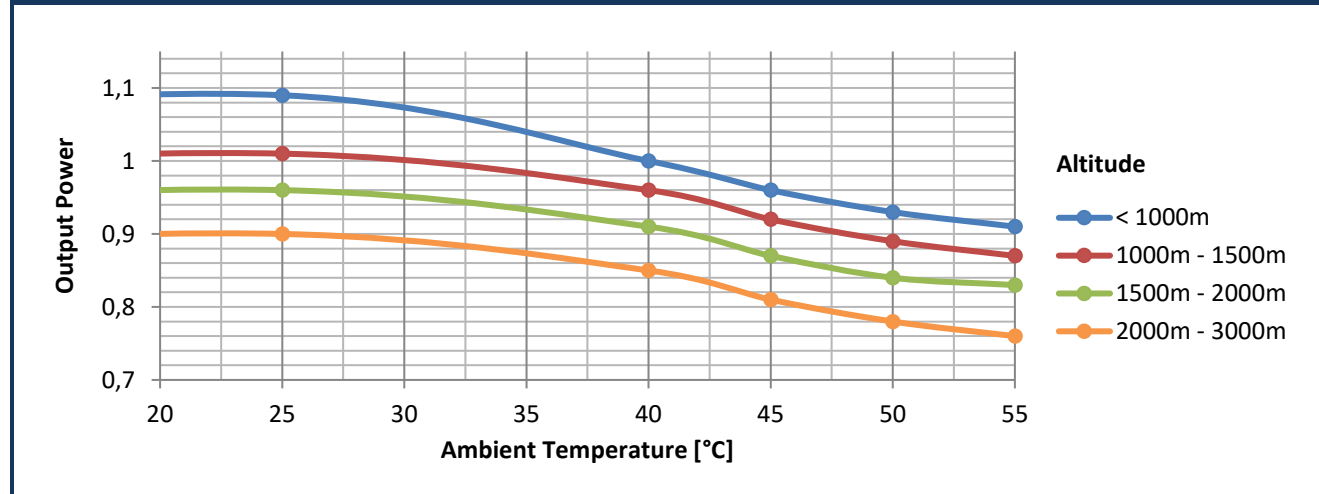
|                                 |           |            |
|---------------------------------|-----------|------------|
| Bearing non drive end           |           | 6305-2Z-C3 |
| Bearing drive end (B3/B14 form) |           | 6208-2Z-C3 |
| Weight of generator             | in B2     | kg 57,6    |
|                                 | in B3/B14 | kg 53,5    |
|                                 | in B3/B9  | kg 50,6    |

# E1C13S B/4

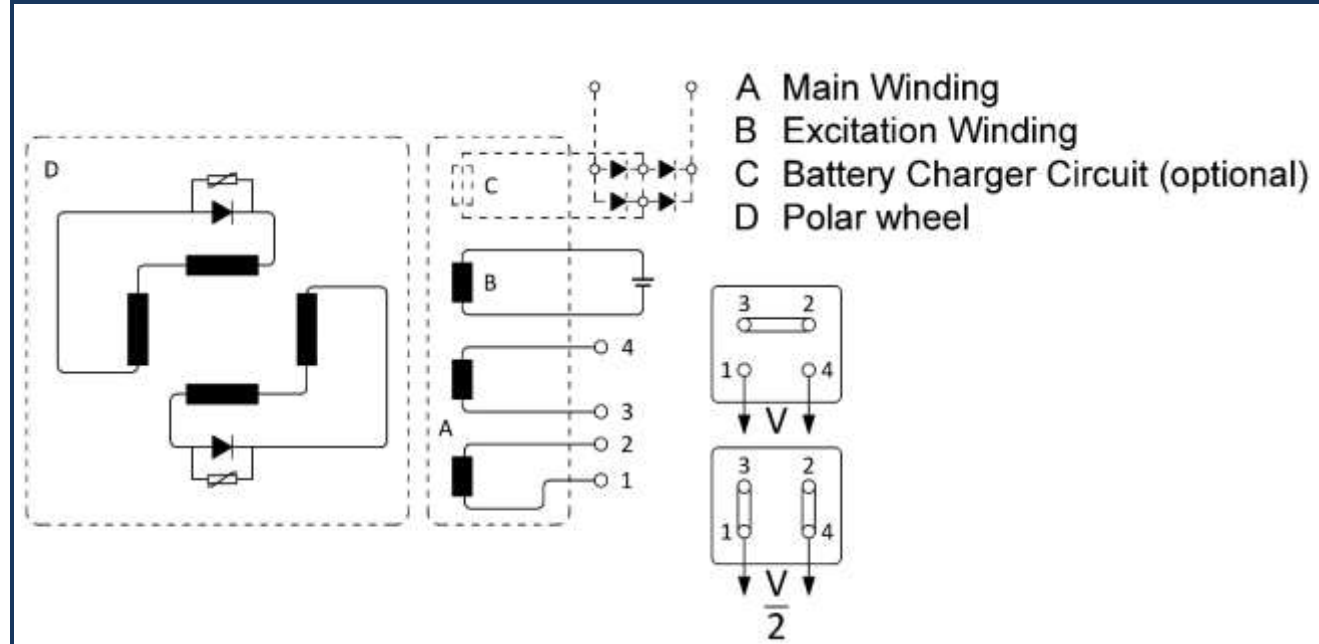
## MOMENT OF INERZIA

|        |                   |       |
|--------|-------------------|-------|
| B3/B9  | kg·m <sup>2</sup> | 0,049 |
| B2     | kg·m <sup>2</sup> | 0,048 |
| B3/B14 | kg·m <sup>2</sup> | 0,049 |

## DERATING CURVES

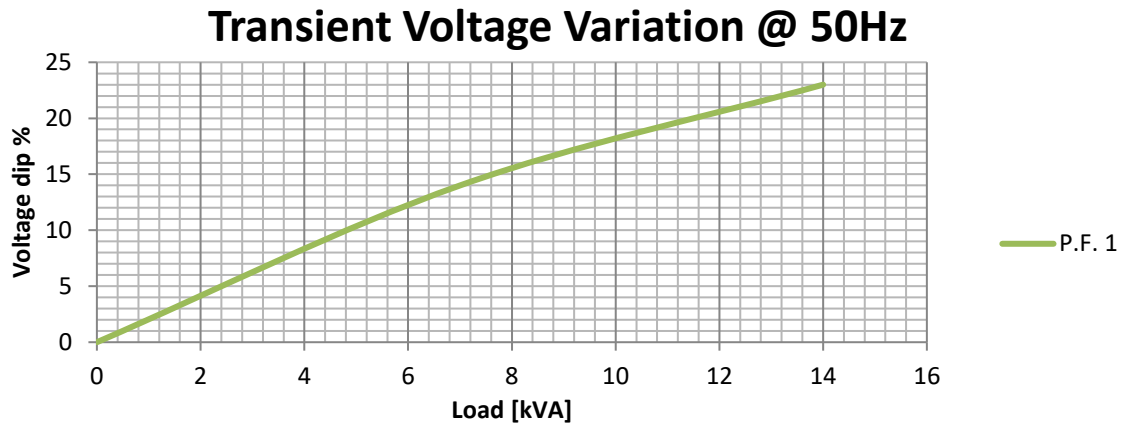


## WIRING DIAGRAM

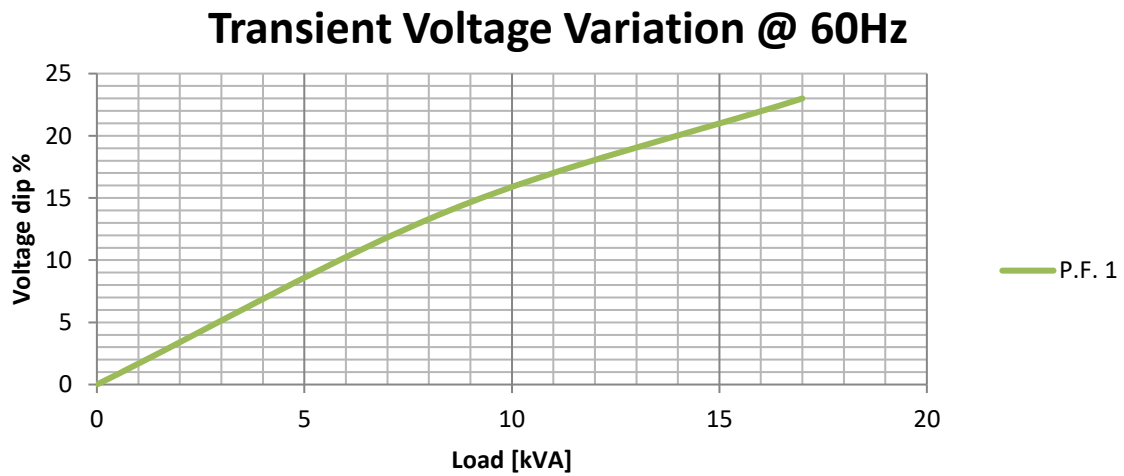


# E1C13S B/4

## TRANSIENT VOLTAGE VARIATION 50Hz



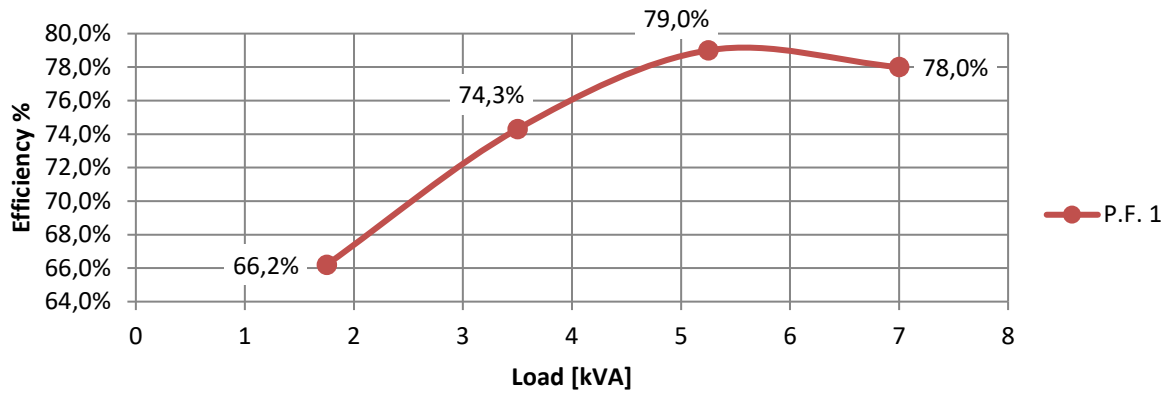
## TRANSIENT VOLTAGE VARIATION 60Hz



# E1C13S B/4

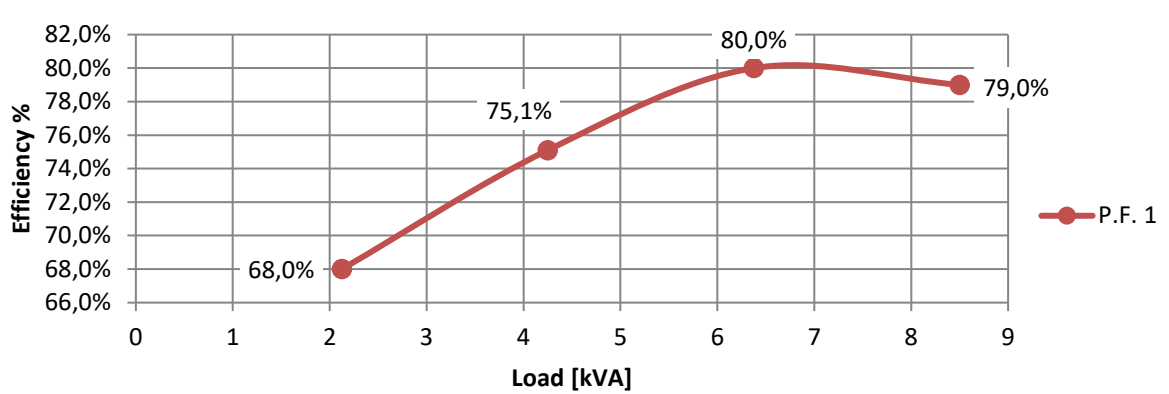
## EFFICIENCY 50Hz

### Efficiency Curves @ 50Hz



## EFFICIENCY 60Hz

### Efficiency Curves @ 60Hz



# E1C13S B/4

