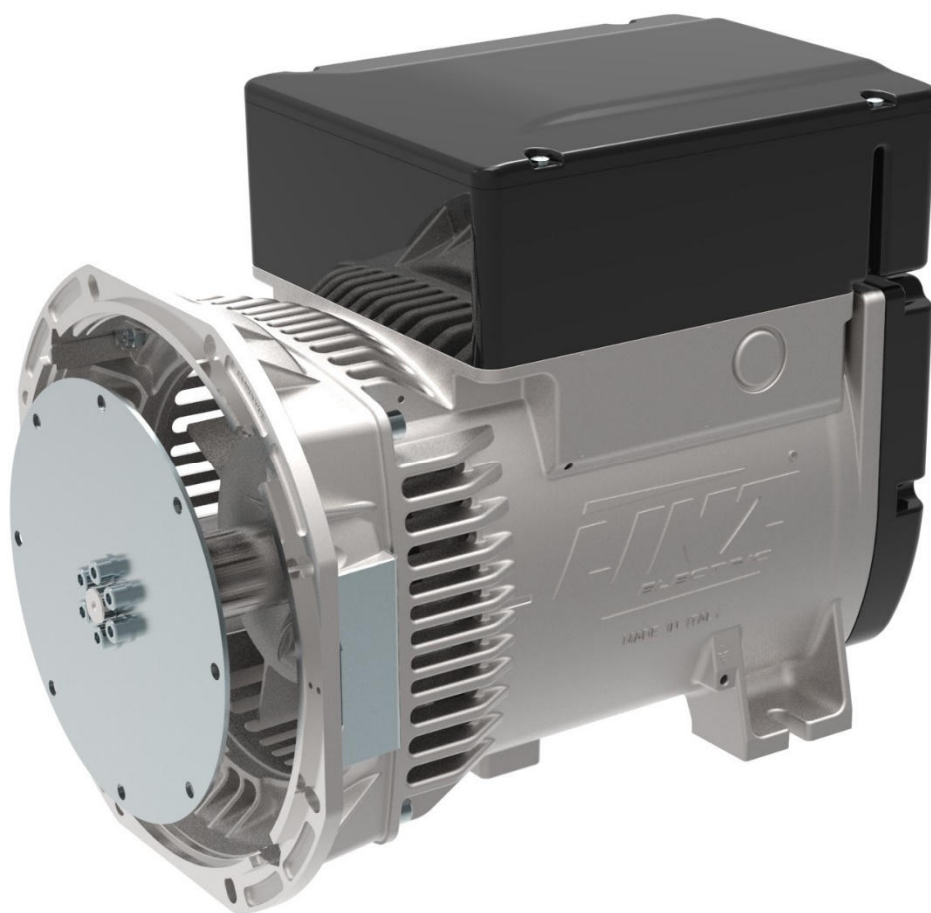


## TECHNICAL DATA SHEET



### ALTERNATOR E1C13S C/4

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

## E1C13S C/4

### COMMON DATA

|                      |                     |                                                        |
|----------------------|---------------------|--------------------------------------------------------|
| Rated Power at 50Hz  | kVA                 | 8,0                                                    |
| Rated Power at 60Hz  | kVA                 | 9,75                                                   |
| 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 | 5,1 at 50Hz      6,1 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      0,41 at 20°C                 |
| Rotor Winding Resistance  | Ω      1,04 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 C/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 (125°C/40°C) | kW | 8,0            | 9,75           |
| Rated Power in Class F (105°C/40°C) | kW | 7,3            | 8,8            |
| Rated Power Standby (150°C/40°C)    | kW | 8,8            | 10,5           |
| Rated Power Standby (163°C/27°C)    | kW | 9,2            | 11,0           |

### EFFICIENCY IN CL. H

|     |       |       |
|-----|-------|-------|
| 4/4 | 79,0% | 80,0% |
| 3/4 | 80,0% | 80,5% |
| 2/4 | 74,0% | 74,6% |
| 1/4 | 70,0% | 71,0% |

### MECHANICAL DATA

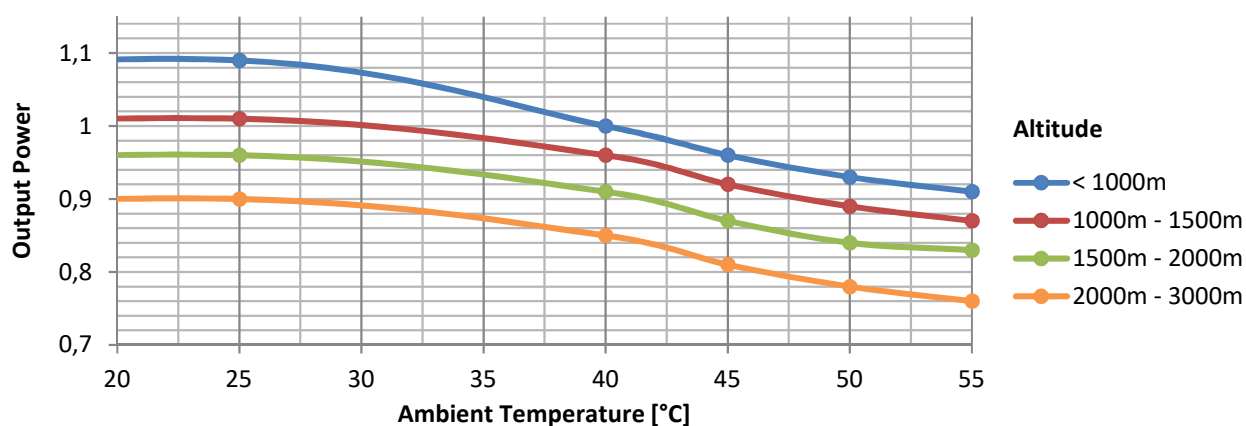
|                                 |           |    |            |
|---------------------------------|-----------|----|------------|
| Bearing non drive end           |           |    | 6305-2Z-C3 |
| Bearing drive end (B3/B14 form) |           |    | 6208-2Z-C3 |
| Weight of generator             | in B2     | kg | 64,1       |
|                                 | in B3/B14 | kg | 60,0       |
|                                 | in B3/B9  | kg | 57,1       |

## E1C13S C/4

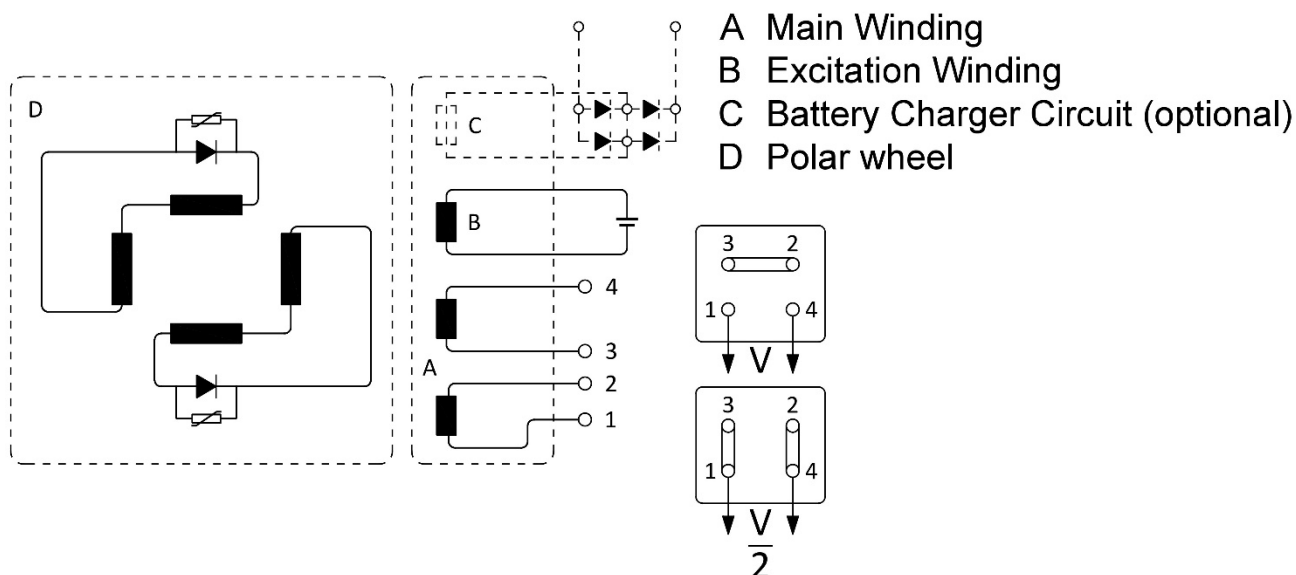
### MOMENT OF INERZIA

|        |                   |       |
|--------|-------------------|-------|
| B3/B9  | kg·m <sup>2</sup> | 0,055 |
| B2     | kg·m <sup>2</sup> | 0,055 |
| B3/B14 | kg·m <sup>2</sup> | 0,055 |

### DERATING CURVES

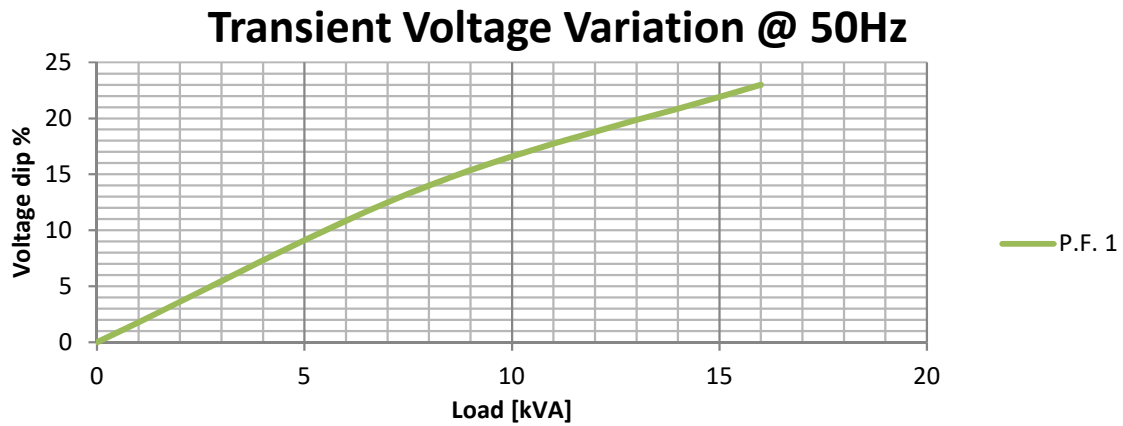


### WIRING DIAGRAM

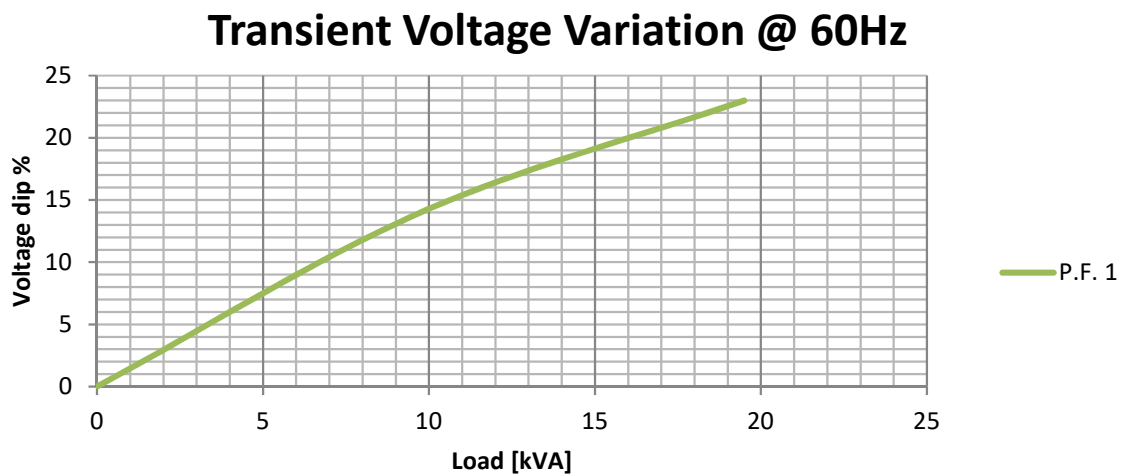


## E1C13S C/4

### TRANSIENT VOLTAGE VARIATION 50Hz



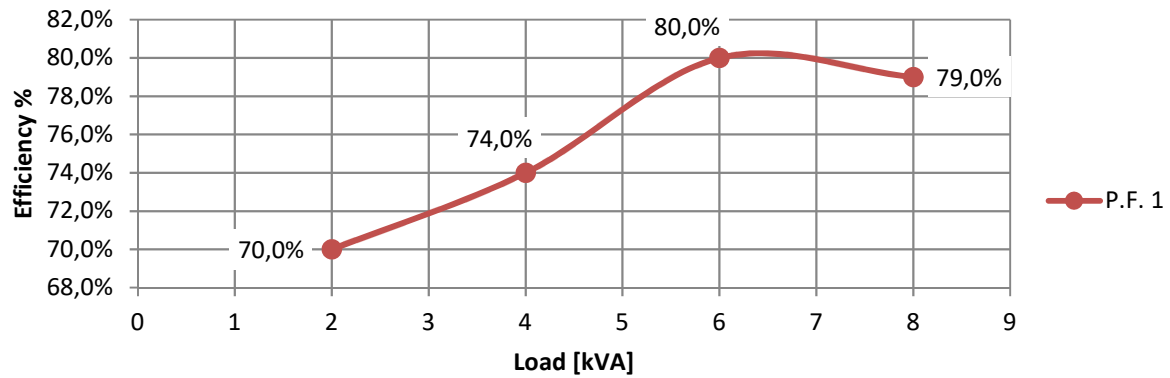
### TRANSIENT VOLTAGE VARIATION 60Hz



## E1C13S C/4

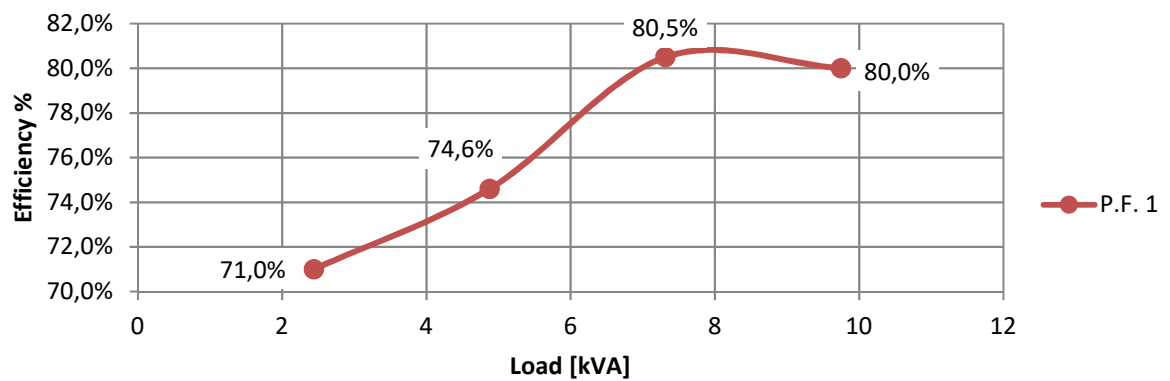
### EFFICIENCY 50Hz

#### Efficiency Curves @ 50Hz



### EFFICIENCY 60Hz

#### Efficiency Curves @ 60Hz



## E1C13S C/4

