

TECHNICAL DATA SHEET



ALTERNATOR PRO18L F/4 - 1PH

Dedicated Single-Phase brushless synchronous alternator with AVR - 4 poles

PRO18L F/4 - 1PH

COMMON DATA

| | | |
|----------------------|---------------------|--|
| Rated Power at 60Hz | kVA | 44 |
| Rated Power Factor | | 0,8 |
| Nominal Temperature | °C | 40 |
| Control System | | self-excited |
| Execution | | brushless |
| Regulation Type | | AVR |
| Insulation Class | | H |
| Protection | | IP23 |
| Maximum Over speed | rpm | 2250 |
| Overload | | 110% of rated power for one hour in a cycle of 6 hours |
| Air Flow Requirement | m ³ /min | 11,5 at 60Hz |
| R.F.I. Suppression | | Standard EN55011 |

REGULATION DATA

| | | |
|-------------------------|--|-------------------------|
| AVR | | HVR11 |
| Sensing | | single-phase |
| Voltage Regulation | | ±1% |
| Sustained Short Circuit | | > 250% of rated current |

WINDING DATA

| | | |
|---------------------------|-----|-------------------------------------|
| Stator Winding | | Double layer with auxiliary winding |
| Rotor Winding | | with damping cage |
| Number of Leads of Stator | | 4 |
| Stator Winding Resistance | Ω | 0,019 at 20°C |
| Rotor Winding Resistance | Ω | 4,53 at 20°C |
| Exciter Stator Resistance | Ω | 13 at 20°C |
| Exciter Rotor Resistance | Ω | 0,72 at 20°C |
| THD at full load | | <5% |
| THD at no load | | <3% |
| Excitation at no load | Adc | 0,91 |
| Excitation at full load | Adc | 2,25 |

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

PRO18L F/4 - 1PH

ELECTRICAL DATA

| Frequency | | 60Hz - 1800rpm | |
|--|-----|----------------|--|
| Voltage Series Star | V | 120/240 | |
| Rated Power in Class H (125°C/40°C) | kVA | 44 | |
| | kW | 35,2 | |
| Rated Power in Class F (105°C/40°C) | kVA | 39,5 | |
| | kW | 31,6 | |
| Rated Power Standby (150°C/40°C) | kVA | 46,5 | |
| | kW | 37,2 | |
| Rated Power (80°C/40°C) | kVA | 34,5 | |
| | kW | 27,6 | |

EFFICIENCY IN CL. H @PF1

| | |
|-----|-------|
| 4/4 | 90,8% |
| 3/4 | 91,5% |
| 2/4 | 87,8% |
| 1/4 | 85,0% |

MECHANICAL DATA

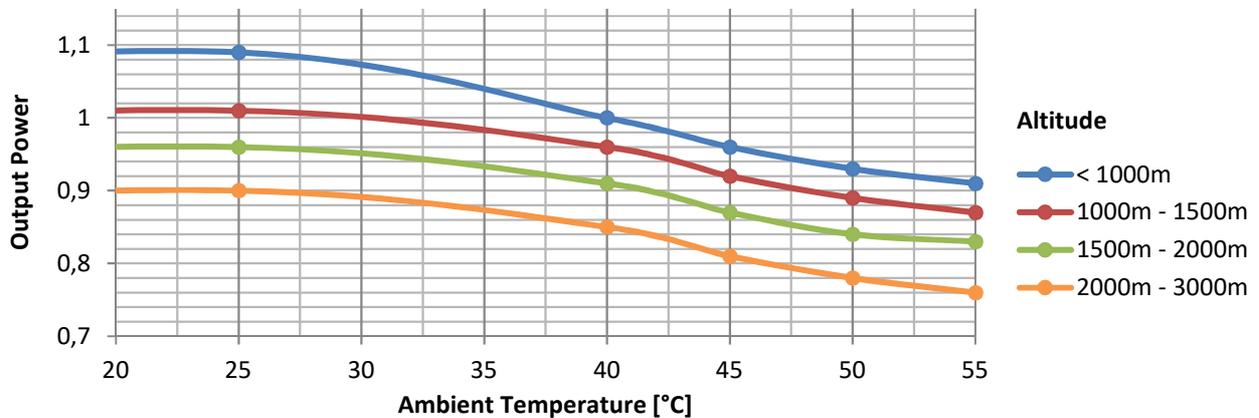
| | | |
|---------------------------------|-----------|-------------|
| Bearing non drive end | | 6307-2RS-C3 |
| Bearing drive end (B3/B14 form) | | 6309-2RS-C3 |
| Weight of generator | in B2 | kg 236,5 |
| | in B3/B14 | kg 238,5 |
| | in B3/B9 | kg \ |

PRO18L F/4 - 1PH

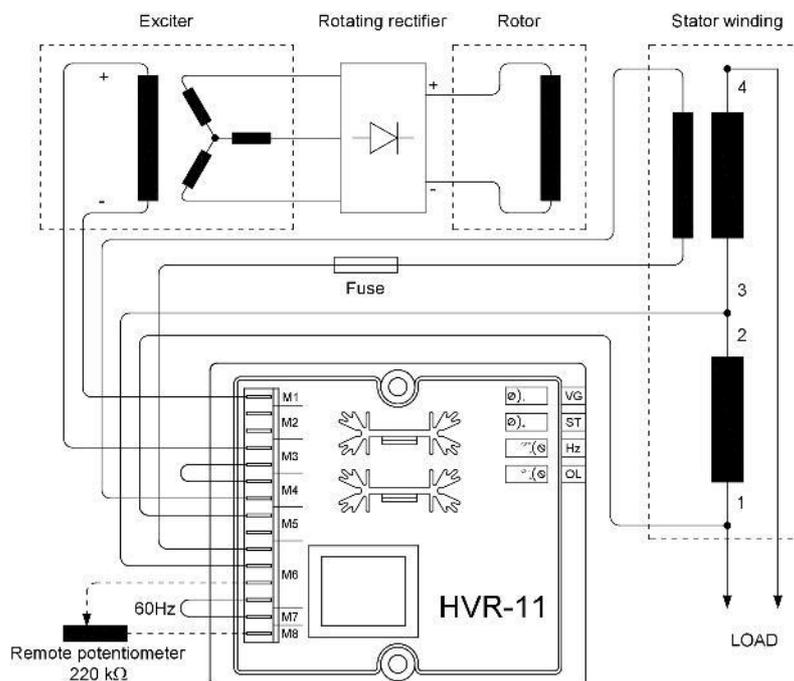
MOMENT OF INERZIA

| | | |
|---------|-------------------|-------|
| SAE 7½ | kg·m ² | 0,441 |
| SAE 8 | kg·m ² | 0,45 |
| SAE 10 | kg·m ² | 0,467 |
| SAE 11½ | kg·m ² | 0,486 |
| SAE 14 | kg·m ² | \ |
| SAE 18 | kg·m ² | \ |
| B3/B14 | kg·m ² | 0,436 |

DERATING CURVES



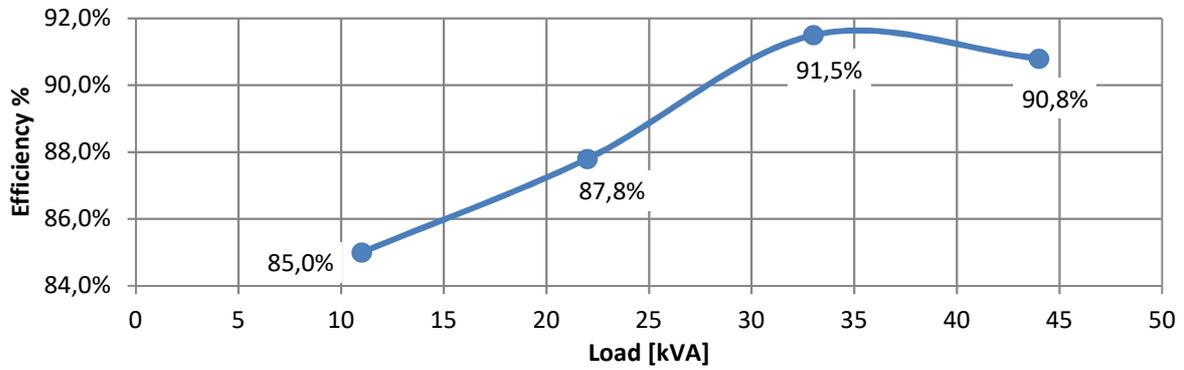
WIRING DIAGRAM



PRO18L F/4 - 1PH

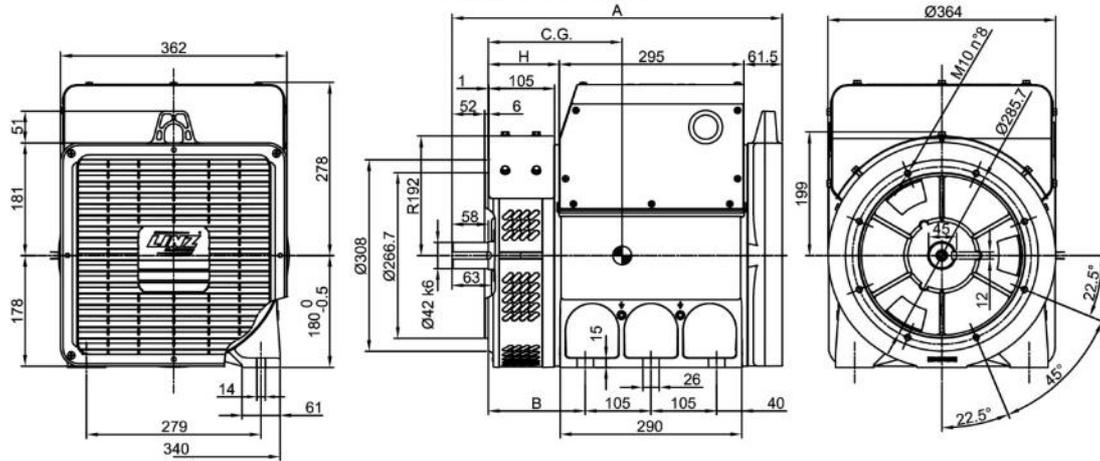
EFFICIENCY 60Hz @PF1

Efficiency Curves @ 60Hz

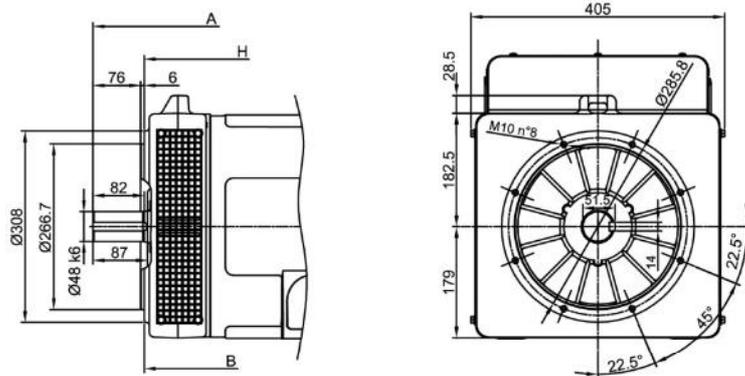


PRO18L F/4 - 1PH

FORMA - FORM B3/B14 'S-M'



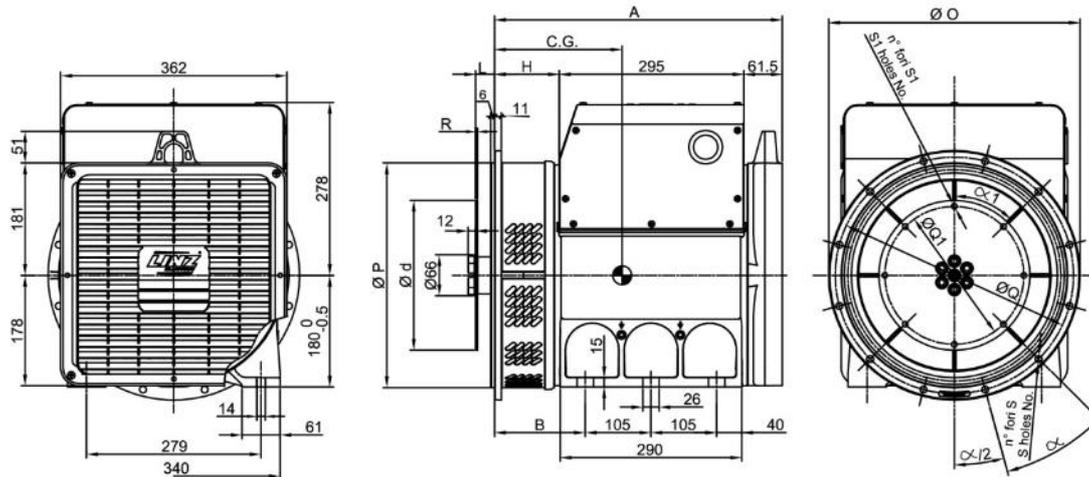
FORMA - FORM B3/B14 'L'



| TIPO - TYPE | C.G. |
|-------------------|------|
| PRO18S A/4 B3/B14 | 217 |
| PRO18S B/4 B3/B14 | 221 |
| PRO18S C/4 B3/B14 | 228 |
| PRO18M D/4 B3/B14 | 251 |
| PRO18M E/4 B3/B14 | 262 |
| PRO18L F/4 B3/B14 | 301 |
| PRO18L G/4 B3/B14 | 318 |

| TIPO - TYPE | C.G. |
|----------------|------|
| PRO18S A/4 SAE | 213 |
| PRO18S B/4 SAE | 217 |
| PRO18S C/4 SAE | 223 |
| PRO18M D/4 SAE | 246 |
| PRO18M E/4 SAE | 257 |
| PRO18L F/4 SAE | 296 |
| PRO18L G/4 SAE | 313 |

FORMA - FORM SAE



| FORMA - FORM | A | B | H |
|--------------|---------|-----|-------|
| B3/B14 | PRO 18S | 528 | 113,5 |
| | PRO 18M | 598 | 183,5 |
| | PRO 18L | 734 | 295,5 |
| SAE | PRO 18S | 460 | 103,5 |
| | PRO 18M | 530 | 173,5 |
| | PRO 18L | 642 | 285,5 |

| SAE N. | FLANGIE - FLANGES - BRIDAS | | | | | |
|--------|----------------------------|-------|-------|-------------------|----|-----|
| | Ø O | Ø P | Ø Q | n. fori holes No. | S | α |
| 5 | 356 | 314,3 | 333,4 | 8 | 11 | 45° |
| 4 | 402 | 362 | 381 | 12 | | 30° |
| 3 | 451 | 409,6 | 428,6 | | | |
| 2 | 490 | 447,7 | 466,7 | | | |

| SAE N. | GIUNTI A DISCO - COUPLING DISCS - JUNTAS A DISCOS | | | | | | |
|--------|---|--------|--------|-------------------|------|-----|-----|
| | L | Ø d | Ø Q1 | n. fori holes No. | S1 | α 1 | R |
| 6 1/2 | 30,2 | 215,9 | 200 | 6 | 9 | 60° | 3 |
| 7 1/2 | | 241,3 | 222,25 | 8 | | 45° | |
| 8 | 62 | 263,52 | 244,47 | 6 | 10,5 | 60° | 4,5 |
| 10 | 53,8 | 314,32 | 295,27 | 8 | | 45° | |
| 11 1/2 | 39,6 | 352,42 | 333,37 | | | | |